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THE

HISTORY

OF

KAMTSCHATKA,

AND THE

KURILSKI ISLANDS,

WITH THE

COUNTRIES ADJACENT;

ILLUSTRATED WITH

MAPS AND CUTS.

Published at *Petersbourg* in the *Russian* Language, by Order of her IMPERIAL MAJESTY

And translated into ENGLISH

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THE RUSSIAN EDITOR's PREFACE.

THERE is perhaps hardly any knowledge more pleaſing than that which ariſes from accurate accounts of the variety of diſtinctions and diviſions diverſifying the face of the habitable globe, were we only to regard it ſo far as it gratifies our curioſity; but more noble purpoſes may be ſtill effected by ſuch informations. All who are employed in the management and ſuperintendency of ſtates and nations ought certainly to have an exact knowledge of thoſe countries over which they preſide, eſpecially with regard to their ſoil and climate; what parts are proper for agriculture, or for paſture, and what are deſert; what rivers are navigable, or may be rendered ſo; what communication there is already, or may be, made, between them; what beaſts, birds, fiſhes, herbs, ſruit-trees, and ſhrubs are found therein, and of what uſe they can be either in diet, medicine, dying, building, or any other part of œconomy; the inhabited and uninhabited parts, cities, forts, havens, mines, traffic, and manufactures; the particular commodities proper for home conſumption, or for exportation; their imports from other countries; the ſituation and diſtances of places; their curioſities, whether natural or artificial; the condition of the public roads: they ſhould likewiſe be acquainted with the cuſtoms and manners of the inhabitants, their number and language, religion, antiquity, and ſettlement; and alſo with the circumſtances of the nations bordering upon them. All which knowledge may not only be ſerviceable to the people themſelves, but likewiſe to neighbouring nations that are connected with them, either by trade or otherwiſe. The natural curioſity of man is not even ſatisfied with this: we frequently give ourſelves a great deal of trouble in ſearch of things that have no relation to us, eſpecially if we have hitherto learned nothing, or at leaſt nothing circumſtantial and certain con-

cerning them. For theſe reaſons I hope readers of every 000
denomination will ſavourably receive this deſcription of *Kamtſchatka*, deſigned both for uſe and entertainment. The author, if death had not prevented him, would himſelf have explained the occaſion that gave him an opportunity of being informed of all theſe particulars; and, as ſuch an account may be expected, I ſhall endeavour to do it for him in as few words as poſſible.

In the year 1733, her Imperial Majeſty *Anne* or- 121
dered an expedition on foot to examine the coaſt of 122
the Northern or Frozen Ocean, likewiſe that to the Eaſt about *Kamtſchatka*, and from thence to *America* and *Japan*; and alſo at the ſame time to make out a deſcription of *Siberia*, and particularly of *Kamtſchatka*; to obſerve the ſituation of the places, their natural hiſtory and inhabitants, and whatever elſe might be neceſſary to a full knowledge of thoſe people. To this end three profeſſors of the Imperial Academy of Sciences were ſent along with the ſea-officers. Theſe three gentlemen divided the task amonſt them; one undertook to make the aſtronomical and phyſical obſervations; the ſecond to remark whatever regarded natural hiſtory; the third to draw
up a deſcription of the people and country. To 122
theſe members of the academy ſeveral other proper aſſiſtants were added: theſe were ſix *Ruſſian* ſtudents, who had an opportunity to improve themſelves while

122 they were aſſiſting the profeſſors, and in time be
qualified to fill up their vacancies. The author,
114 *Stephen Kraſheninicoff*, one of the above-mentioned
ſix, was born in *Moſcow*, and had his firſt education
in the Latin ſchool of the convent of our Lord, where
he learned the principles of rhetoric and philoſophy,
and excelled moſt of his ſchool-fellows, both in capacity
and application to his ſtudies. Though he was
principally employed in the ſtudy of natural philoſophy,
yet he ſhewed ſuch inclination to geography
and civil hiſtory, that in the Year 1735 he was employed
in theſe different enquiries at ſuch places as the
122 profeſſors themſelves did not viſit. In the year 1736
the members of the academy, being at *Yakutski*,
were informed, that the ſea-officers had made but a
ſmall progreſs in their diſcoveries, and that they
would not be able to reach *Kamtſchatka* in ſeveral
years; the profeſſors therefore having many uſeful
obſervations to make in *Siberia*, thought proper to
ſend before them a perſon, on whom they could depend,
to prepare for their reception at *Kamtſchatka*.
To this truſt Mr. *Kraſheninicoff* was appointed, and
at the ſame time was furniſhed with proper inſtructions
and directions. Some accidents prevented the profeſſors
from arriving at *Kamtſchatka*, excepting the profeſſor
of aſtronomy; the others were ordered by the ſenate
to return to St. *Petersbourg*, and in their way to
make further obſervations in *Siberia*. Thus all enquiries

quires into the ſtate of *Kamtſchatka* remained to be made entirely by Mr. *Kraſheninicoff*. The profeſſors furniſhed him with ſuch aſſiſtances as they themſelves had, by order of the ſenate. He travelled from one end of *Kamtſchatka* to the other, accompanied by a guard and proper interpreters, being allowed to examine all the writings in the different forts and offices. The profeſſors alſo, in the frequent accounts received from him, found that his obſervations in natural hiſtory and phyſics were juſt; and in any difficulties aſſiſted him with their advice by letters.

In the mean time, the Imperial Academy of Sciences, ſenſible of the importance of purſuing their reſearches into the regions of *Siberia*, thought proper to ſend thither, in the year 1738, one of their adjuncts, *George William Steller*, who met the profeſſors the following year in their return at *Yeneſeisky*. This learned and curious gentleman had a great inclination to go to *Kamtſchatka* by water. His deſire was complied with; and the ſame inſtructions were given to him that were given to Mr. *Kraſheninicoff*. They ſent likewiſe along with him a painter, to delineate whatever might be ſound curious in natural hiſtory. They continued together at *Kamtſchatka* 'till the year 1740, at which time Mr. *Steller* embarked in the voyage that was made in order to diſcover the coaſt of *America*; and Mr. *Kraſheninicoff* was ſent to *Yakutski*, which as ſoon as the profeſſors

122 were informed of, they ordered him to join them,
and return with them to *Petersbourg* in the year
1743. Mr. *Steller*, in his return from *Siberia*, died
of a fever the 12th of *November*, 1745, in the town
of *Toumen.*

128 When Mr. *Kraſheninicoff* had given the Academy of
Sciences a full report of all his obſervations at *Kamtſchatka*,
and had likewiſe received all Mr. *Steller*'s
papers, it was thought proper to join theſe two works,
and to commit their compilement to the perſon who
had the greateſt ſhare in the merit of the diſcovery.
This is the origin of the following deſcription of
Kamtſchatka; a country never yet deſcribed by any
author of credit, and where the manners and cuſtoms
of the inhabitants are beyond meaſure ſingular and
114 uncommon. It is to be wiſhed that ſuch writers as
have hitherto given us accounts of new-diſcovered
countries had taken the ſame pains to inform themſelves
that this writer hath. The author was advanced
in the year 1745 to be an adjunct of the
Academy of Sciences, and in the year 1750 was made
profeſſor of botany and natural hiſtory. He died in
the 42d year of his age, when the laſt ſheets of his
book were printing off; and was one of thoſe few
whom perſonal merit alone, and no advantages of
birth or fortune, contributed to raiſe.

102 For the better underſtanding of the geographical
128 deſcriptions, it was thought proper to add two maps
of

of *Kamtſchatka* and the neighbouring countries, between which and other maps of thoſe countries, even ſuch as the academy itſelf hath formerly publiſhed, the curious reader may obſerve a great difference. But the author aſſerts that every thing is laid down from the ſtricteſt inquiry, and had purpoſed to ſupport the authenticity of his maps, by publiſhing ſuch memoirs as would prove their accuracy beyond diſpute. 102 128

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A GENERAL

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THE Ruſſian *language in which the Original of the following ſheets was written, is rude and unpoliſhed: other nations have with great care improved and refined their languages by giving proper encouragement to men of learning and genius, but in that country literature has, on the contrary, been 'till very lately rather diſcouraged.*

Great indulgence ſhould, therefore, be allowed the Author of this work: for though his manner is indigeſted, and his ſtile inelegant, abounding in digreſſions, and ſome unintereſting narrations, which obſcure and confuſe the more eſſential paſſages; yet he has communicated

nicated many very uſeful remarks, greatly contributing to the improvement of the trade, geography, and natural hiſtory, of the country he deſcribes.

In order to render this piece more regular and perfect, it would have been neceſſary to new model the whole; but the gentleman, who undertook this Tranſlation only for his amuſement, was frequently interrupted in the courſe of the work by the neceſſary duty of his profeſſion, and prevented from reviſing it before it went to the preſs by his ſudden departure for Petersbourg. *Having been many years abſent from* England, *and accuſtomed to write and ſpeak in ſeveral different languages, he of courſe adopted their idioms, and, conſequently, corrupted the phraſeology of his own. Thus much it is thought neceſſary to ſay in juſtice to the Tranſlator: and it muſt be confeſſed he has great merit with his countrymen; as it is entirely owing to his labours, haſty and imperfect as they may ſeem, that we have any knowledge of this remote, unknown, and very extraordinary country, ſince ſo few, and it may be ſaid, ſcarce any* Engliſhman *is able to read the Original.*

This

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This work is divided into four parts. The firſt, which is entirely Geographical, and in the Original makes eleven chapters, is here abridged, and reduced to four, as the Author had minutely deſcribed a great number of hills and rivers which did not ſerve to illuſtrate the ſubject. But it is hoped that nothing is omitted which may anſwer that end, or which might in any way entertain the reader, or help to aſcertain the ſituations, meaſures, diſtances, and boundaries.

The ſecond part contains the Natural Hiſtory. This part has alſo been greatly contracted, from the deſign of offering to the reader nothing but what was really uſeful, curious, or entertaining; and in order to make it completely inſtructive, many notes have been adjoined, to explain ſome articles, or reconcile them with the accounts of former voyagers.

The third part of this work has been moſt conſiderably abridged, as in treating of the manners, cuſtoms, and religion of this barbarous nation, it was loaded with abſurd practices, idle ceremonies, and unaccountable ſuperſtitions. Sufficient examples of all theſe have been *retained to ſhew the preciſe ſtate of an unpoliſhed, credulous, and groſly ignorant people.*

The fourth contains the firſt diſcovery, conqueſt, and planting of Ruſſian *colonies in the country of* Kamtſchatka. *This part is divided into eight chapters, giving a relation of ſeveral expeditions both by ſea and land made into that country. It is alſo interſperſed with a great many uſeful remarks relative to the geography, natural hiſtory, cuſtoms, manners, and civil and military policy, of the country. It likewiſe gives a particular account of the forts built there by the* Ruſſians, *as well for the protection of their ſettlements, as to keep the natives in awe.*

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E R R A T A.

For	Fructicoſa	*Page* 88,	*Annot.*	*read*	Fruticoſa
	Chœreoptrylum	89,			Chœrophyllum
	Autoris.	141,			Autorum !
	Caudacuta	159,	*Line* 29,		Caudâ acutâ
	Self-murd	176,	26,		Self-murder
	Dood. Append. 326, Ray Linn.	192,	*Annot.*		Doodij Raij Syn. II. Append. 329
	Pentaphylladis fructicoſus,	219,	*Line* 1,		Pentaphylloides fruticoſa
	Chamaenchododendros	219,	18,		Chamærododendron
	Anemonides	220,	15,		Anemonoides

e.

A GEOGRAPHICAL DESCRIPTION OF

KAMTSCHATKA.

AND OF THE

COASTS and ISLANDS adjacent to it.

PART I.

CHAP. I.

Of KAMTSCHATKA.

THOUGH the country called *Kamtſchatka* was long known to the geographers of former times, yet ſo little were they acquainted with its ſituation, that they believed it to be joined to *Yeſſo*; and this opinion was looked upon in thoſe days as a very probable conjecture: but it has been ſince found that between the two countries there is a large ſea, interſperſed with many iſlands. The

Ruſſians could form their maps of *Kamtſchatka* only from conjecture 'till it was brought under their ſubjection; and then they could not immediately procure any accurate or ſatisfactory knowledge of the country, for want of perſons properly qualified to make the neceſſary enquiries.

The two late expeditions have greatly contributed to complete the geography of theſe parts; particularly the laſt, in which the ſea-officers delineated exactly all the eaſtern coaſt of *Kamtſchatka* as far as the cape of *Tchukotſkoi*, all the weſtern to the *Penſchinſka* gulph, and from *Ochotſkoy* to the river *Amur*: they deſcribed the iſlands lying between *Japan* and *Kamtſchatka*, and alſo thoſe which are between *Kamtſchatka* and *America*. At the ſame time the gentlemen of the Academy undertook to determine the ſituation of *Kamtſchatka* by aſtronomical obſervations, and to remark every thing worthy of notice in the civil and natural hiſtory of the country and places adjacent. In this chapter I ſhall only treat of the geography of this country.

That great peninſula, which makes the boundary of *Aſia* to the north-eaſt, and ſtretches itſelf from north to ſouth about 7° 30′, is called *Kamtſchatka*. I place the beginning of this peninſula at the rivers *Puſtaia*, and *Anapho*, lying in the latitude of 59° 30′. The firſt runs into the *Penſchinſka* ſea, and the other to the eaſtward. At theſe places the iſthmus is ſo narrow, that I am credibly informed the ſea may in fair weather be ſeen on both ſides from the hills in the middle. As the country runs broader towards the north, I reckon this place the iſthmus that joins the peninſula to the main land. The government of *Kamtſchatka* extends no farther than to this place; and all the country north of this boundary is called *Zenoſſe*, and is under the government of *Anadir*.

The ſouthern part of this peninſula, which is called *Lopatka*, lies in 51° 3′ north latitude. The difference of longitude from *Peterſbourg* is by the beſt obſervations found to be at *Ochotſkoy*

112° 53′ eaſt longitude, and thence to *Bolſcheretſkoi* or the Great River 14° 6′ eaſt. The figure of the peninſula of *Kamtſchatka* is ſomewhat elliptical, being broader towards the middle, and growing narrower towards both ends. Its broadeſt place is between the mouth of the river *Tegbil* and the river *Kamtſchatka*. Towards the ſource they are joined by the river *Elouki*. /131

The *Elouki* runs in the ſame latitude with thoſe rivers for 415 verſts. They call the ſea which ſeparates *Kamtſchatka* from *America* the Eaſtern Ocean. On the weſtern ſide lies the *Penſchinſka* ſea, which begins near the ſouthern point of the cape of *Kamtſchatka* and the *Kurilſki* iſlands, and runs northward between the weſtern coaſt of *Kamtſchatka* and the coaſt of *Ochotſkoy* more than 1000 verſts. The northern part is called the /133 bay of *Penſchinſka* from the river *Penſchina* which falls into it. The hills make one continued ridge from north to ſouth through the peninſula, almoſt equally dividing the country. From this ridge ſeveral others extend towards the ſea, between which are the courſes of the rivers. Theſe ridges ſometimes run a conſiderable way into the ſea, and are called Noſs, or capes. There are more of theſe upon the eaſtern than the weſtern coaſt. All the bays between the capes are called, in general, ſeas; each having its particular name, as the *Olutorſky* ſea, *Kamtſchatka* ſea, &c. We /103 ſhall hereafter give our reaſons for calling the whole peninſula by the name of *Kamtſchatka*, though in fact it hath in none of the different languages of the inhabitants any general appellation; but every part of the country receives its name from its inhabitants, or ſomething remarkable obſerved in it: and even the *Ruſſian* Coſſacks underſtand *Kamtſchatka* to be only the country lying near the river of that name; and to the other parts of this peninſula they have given the following appellations:

Kurilſki Country is the ſouthern part, ſo named from the *Kuriles* that inhabit it.

103 *The Coaſt* extends from the *Bolſcheretſkoi* or Great River to the *Tegbil.*

Awatſcha extends from the *Bolſcheretſkoi* to fort *Awatſcha.*

Bobrovoi or *Beaver Sea* is the diſtrict round *Kamtſchatka.*

Koreka, from the *Koreki* that inhabit it, extends from the north of the *Kamtſchatka* to the *Tegbil.*

Ukoi is the eaſtern coaſt from the river *Ukoi.*

Tegbil is the weſtern coaſt from the river *Tegbil.*

133 *Kamtſchatka* is plentifully furniſhed with rivers; however they
361 are ſo little that none of them are navigable by the ſmalleſt veſſels,
563 except the river *Kamtſchatka*, which will carry ſmall veſſels 200
verſts upwards from its mouth. Into this river it is reported that
ſome *Ruſſians* were brought by ſea, long before its ſubjection to
Ruſſia. It is at preſent called *Theodotoſhine*, from the chief of
thoſe people thrown a-ſhore, whoſe name was *Theodot.* Next to
this, the moſt conſiderable rivers are, the *Bolſchaia-reka*, or Great
River, *Awatſcha* and *Tegbil*; upon which the *Ruſſians* have ſettlements.
133 *Kamtſchatka* is likewiſe very well furniſhed with lakes,
particularly about the river of that name, where they are ſo numerous
that there is no paſſage over land in the ſummer-time.
Some of them are very large: the moſt conſiderable are, the lake
of *Nerpitche*, which is near the mouth of the *Kamtſchatka*; the
Kronotzkoy, out of which runs the river *Krodakigbe*; and the
Kurilſkoy, out of which runs the river *Oſernoi.*

133 The river *Kamtſchatka* riſes in a marſhy ground, and firſt runs
712 north-eaſt; then inclines more to the eaſt, and turning at once
R towards the ſouth-weſt, falls into the ocean in 56° 30′ north
177 latitude. From its ſource to its mouth, in a ſtrait line, is 496
.71 verſts; but the length of its courſe, according to the exacteſt
computation, is about 525 verſts; during which it receives into
it many brooks and rivers. About two verſts from its mouth,
upon the right ſide, are three deep bays. There are ſeveral forts
built along the banks of this river by the *Ruſſian* Coſſacks, to

awe and keep in ſubjection the wild inhabitants. The *Elouki* 133
may be reckoned the chief of all the rivers that fall into the 712
Kamtſchatka on the left ſide, and its head meets that of the 361
Tegbil. R

The *Tegbil* runs almoſt in the ſame latitude with the *Kamtſchatka*; 177
and the ſtrait road from the one to the other is by the .71
river *Elouki*. Some little forts and ſettlements of the natives are
ſcattered here and there upon its banks.

The *Bolſchaia-reka*, or Great River, called by the natives 103
Keekſka, runs out of a lake 185 verſts to the eaſt from its mouth,
and falls into the *Penſchinſka* ſea in the latitude of 52° 45'. Its 133
mouth is reckoned to be 555 verſts to the ſouth diſtant from that
of the *Tegbil*. It is called Great upon this account, that of all
the rivers that fall into the *Penſchinſka* ſea this is the only one
which they can navigate from its mouth nearly to its ſpring,
and this not without ſome difficulty, on account of its rapidity
and the great number of iſlands. At the time of high water it is 133
ſo deep at the mouth that large veſſels may enter; for the water
has been obſerved to riſe at full and new moon very little leſs than 489
nine *Paris* feet or four *Ruſſian* yards. It receives a multitude of
rivulets; the moſt conſiderable of which is the *Biſtroy* or Rapid
River, ſo called from the ſwiftneſs of its ſtream, cauſed by the
many ſhoals and cataracts. You may go from the mouth of the
Great River to that of the *Biſtroy*, and up within 40 verſts of its
head; and from thence over a carrying place to the river *Kamtſchatka*,
that ſprings out of the ſame marſh, and runs quite to the
Eaſtern Ocean. And though this paſſage muſt be laborious and 489
tedious, upon account of the rapidity of the river, and the many
ſhoals and cataracts, where every thing muſt be carried by land,
and which would render it impoſſible to advance more than 10
verſts in a day (as I found in my way to *Kamtſchatka* in the
year 1739, when the boats were carried over the marſh, about
two verſts from the head of the Rapid, to *Kamtſchatka*); yet,

conſidering

489 conſidering that all ſorts of carriages in the ſummer are worked from one ſettlement to another by men, the ſaid paſſage by water would be a great help to the people of this country who are obliged to carry ſtores and baggage for the government: for, inſtead of employing 10 or 15 men about a carriage of 20 pood, the ſame would be performed with leſs trouble in a ſmall boat by two; and to encreaſe the facility of commerce, there would at all times be a free road, which is the caſe now only in winter.

It may be hoped, however, that even without ſuch a road this difficulty will be removed, when the new colony ſettled there ſhall have a ſufficient number of horſes for drawing thoſe carriages. From the *Bolſcheretſkoi* to the upper fort you may travel in carts drawn by horſes; but, in ſummer, this is practicable in no other part of the country by reaſon of frequent obſtructions from rivers, marſhes, lakes, and high mountains.

133 The *Baranew* rivulet is particularly remarkable for the number of boiling ſprings which are found near it. It falls into the *Keekſha*, on the ſouth-eaſt ſide, 44 verſts from *Bolſcheretſkoi*; and upon the mouth of it ſtands the ſettlement *Kalickin*, or *Opachin*, which is about 70 verſts diſtant from the boiling ſprings.

The river *Awatſcha* riſes from under a mountain about 150 verſts from its mouth, and runs from weſt to eaſt 'till it falls into the bay of St. *Peter* and St. *Paul* in the Eaſtern Ocean, almoſt in the ſame latitude with the *Keekſha*. This river is very near as large as the laſt, and of more utility.

The bay of St. *Peter* and St. *Paul*, or *Awachinſkaya* bay, is 14 verſts in length, and as many in breadth, of a circular form, and ſurrounded on all ſides by high rocky mountains. Its mouth, conſidering the ſpace of the bay, is very narrow, and ſo deep that ſhips of all dimenſions may enter it without any danger. Upon its banks are built, by order of the navy, officers' apartments, barracks, magazines, *&c.* On the north ſide of the

Awachinſkaya bay, almoſt oppoſite the *Kareemchin* fort, are two 133
high mountains, one of which ſmokes almoſt continually, and
ſometimes burns.

The breadth of the cape of *Kamtſchatka*, between the mouth of the *Keekſha* and the *Awachinſkaya* bay, meaſures from ſea to ſea, by a ſtrait line, only 255 verſts; a diſtance much leſs than that between the *Tegbil* and the *Kamtſchatka*.

There are a multitude of rivulets which fall into the Eaſtern
Ocean between the mouth of the *Awatſcha* northward, and the
river *Kamtſchatka*, and from that again to the *Anadir*; but being
of ſmall note, we ſhall only remark any thing that may be curious
relating to them; among which may be reckoned the mountain
Shupanoveſkaya, ſo called from *Shupanova* a ſtream near which it
ſtands. This mountain is a volcano, and has ſmoked at the top
in ſeveral places for many years, and ſometimes rumbles, but does
not flame. The *Camel's Throat*, a rivulet near this hill, is remarkable 133
for the danger of its paſſage through a very narrow 823
valley, between high and ſteep mountains, from whence the ſnow 784
is apt to tumble upon the ſlighteſt accident, even, it is ſaid, from
a ſtrong exertion of the voice; and, falling down in vaſt heaps,
ſometimes buries paſſengers under it; for which reaſon the natives
make it criminal to ſpeak aloud as they paſs through the valley:
in other reſpects the road is very convenient. On the ſouth ſide 133
of the river *Shophead*, or *Shupanova*, near the ſea ſhore, are a great
many pillars or rocks, which appear above water, and make its
entrance very dangerous; a little beyond this to the ſouth is a
bay, called *Nutrenoi*, ſurrounded by rocky mountains, about four
verſts in length and breadth; and near it, about the head of a
rivulet, called *Shenmeek*, are large wells of boiling water. Out of
a mountain near theſe ſprings, in many places, proceeds a ſteam,
and the bubbling of boiling water is heard, but no ſprings have
made their way through yet, though there are conſiderable fiſſures
here and there, and the ſteam iſſues forth with the ſame rapidity

as

133 es out of the *Eolipile*, and is ſo hot that the hand cannot bear it. After paſſing through a very woody and mountainous country, we come to the remarkable ſtream *Krodakigbe*, or the Larch-Tree River, which ruſhes out of the great lake *Kronotzkoy*, in ſuch a caſcade that one may walk under it: this lake is in length about 50 verſts, reckoned to be 40 in breadth, and is near 50 from the ſea. Around it are high mountains, two of which about the ſides of the upper mouth of the rivulet *Krodakigbe*, riſe above the reſt. Multitudes of rivulets empty themſelves into the lake *Kronotzkoy*, whoſe ſprings are near thoſe rivers which run into the *Kamtſchatka*.

101 From this place, nothing worth remarking occurs 'till we
133 come to the *Kronotzkoy* Noſs; and here begins the Beaver Sea, which extends to the *Shupinſkoy*. The coaſt from the *Kamtſchatka* to the *Kronotzkoy* Noſs is every where ſandy; and near the bay, called *Ukinſkaya*, begin the habitations of the ſettled *Koreki*; but the *Kamtſchadales* inhabit all the country to this place.1

103 The river *Nungeen*, which falls into *Nutrenoi* bay, is called, by the Coſſacks, *Pankara*, becauſe there was formerly on the ſouth ſide of the bay a ſmall *Koreki* fort of the ſame name; but the inhabitants having built a ſmall fort on a high hill on the northern ſide of the bay, which they called *Gengota*, abandoned it: this fort is ſurrounded with a wall of earth about
000 a fathom high, and a yard thick, having within it a double palliſade, and on each ſide are two baſtions raiſed. It has three gates to the eaſt, weſt, and north. The *Koreki* purpoſe to leave their old fort, and to remove into the new one, which they have built about the inward point of the above-mentioned bay, and call it *Ueackang-Atenum*: this was the firſt place that I found fortified by the natives; for the others were nothing more than habitations dug in the earth, ſurrounded with huts, as with ſo many towers without any outward fortifications;

1 [all the country south of Ukinskaya Bay]

fications; but, on the contrary, further to the north, there is 000
not one ſettlement of theſe people which has not, beſides its
natural ſtrength of ſituation, a wall to cover it. The *Koreki*
in thoſe places ſay, that they thus provide for their defence
againſt the incurſion of the *Tchukotskoi:* but as that people
have never invaded theſe places, ſome other cauſe muſt be ſought
for this precaution of the *Koreki*; and we can account for it
only from their apprehenſions of the Coſſacks, who uſually travel
this way.

Upon the north point of a bay which receives the *Kitkitannu*, 133
a rivulet, there is a ſmall fort built on a high rock, and forti-
fied by a wall of earth about 10 feet in height. Its gates are
on the eaſt and ſouth ſides. The inhabitants of it are under the
commander of the ſmall fort *Keemgu*, whom the Coſſacks
call a *Ruſſian*, he being of that extraction. From this fort
there is a low cape that projects into the ſea; beyond this cape
there is a deep bay of about eight verſts in breadth, and
equally as broad at its mouth as in the middle; but all the reſt
of the bays which I have ſeen are narrow at their mouths. Into
this bay the river *Karaga* enters by two mouths, and almoſt meets
near its head with the *Leſnaya* river, to which they uſually go from
the *Karaga*. On the north ſhore of the bay there ſtands, on a
high hill, the ſmall fort *Keetalgeen*, in which every hut is in-
cloſed with a paliſade. Beſides this ſmall fort on the river *Ka-
raga*, there are two other ſettlements of the *Korcki*. Over-
againſt the mouth of the *Karega*, 20 verſts from the ſhore, is
an iſland, called *Karaginſkoy*, the lower end of which is oppo-
ſite to *Nungeen*, and the upper end to *Kute* cape. *Koreki* in- 101
habit this iſland; but thoſe on the continent do not allow them
to be of the ſame race with themſelves; and it muſt be
obſerved, that the manners of the *Karaginſkoy* appear as bar-
barous to the *Koreki*, as thoſe of the *Koreki* do to more
civilized nations.

000 civilized nations. Their number is reckoned to be 100 men or more, but not above 30 of them pay any tax, the reſt, at the time of its gathering, hiding themſelves in the mountains. They go to this iſland in the ſummer in their little boats; but in the winter they have no communication with it.

/133 There is little worth notice after you paſs the above-mentioned
721 iſland, 'till you come to the *Uyulen* or *Olutora* river. Upon this
R river the *Ruſſians* twice built the *Olutorſkoy* fort. The firſt was
177 built by a native of *Jakutſki*, called *Athanaſey Petrove*, upon
.71 the ſouthern ſhore, very little above the mouth of the *Kalkina* rivulet which falls into the *Olutora* from the ſouth; and the ſecond a great deal below that place under the direction of Major *Paulutſkoy*, who was ſent there on account of the rebellious *Tchukotſkoi*; but both of them were forſaken and burnt down by the *Olutores*. The laſt fort is about two days' voyage from the mouth of the *Olutora*.

/133 The *Atwaleck* cape, which extends 80 verſts into the ſea, begins near the river *Elir*, and points towards the *Govyannoy* cape. The ſea between thoſe capes is called *Olutorſkoy*. The *Pockatska* riſes in the ſame plain with the river *Glotova*, which runs from the north-eaſt into the *Olutora*. From the *Kalkina*, where was built the firſt *Olutorſkoy* fort, to the river *Pockatska*, is five days' journey with rein-deer, reckoning for each day between 30 and 40 verſts. Between the *Katurka* and the land oppoſite to *Anadir*, there projects into the ſea a rocky cape, called *Kateerſkoy* in 64° 15′ north latitude. The diſtance from the *Petropaulauskaya* haven to the mouth of the *Anadir*, as obſerved by the ſea-officers, is 19°. 20′; and the ſea coaſt from the *Kurilskaya Lopatka* to the *Tchukotskoi* cape, north eaſt, which lies in 67°, is for the moſt part mountainous, eſpecially in thoſe places where the capes project into the ſea.

We now come to conſider the rivers that fall into the Eaſt 133 Sea from the mouth of the *Awatſcha*, towards the ſouth, to the *Kurilskaya Lopatka*; and from the *Kurilskaya Lopatka* into the *Penſchinska* ſea to the *Tegbil* and the *Puſtaia* rivers.

There are but few rivulets that interſect the country between the mouth of the *Awatſcha* and the *Lopatka*. The ridge of mountains, which divides *Kamtſchatka*, extends to the Eaſt Sea: the declivity is ſteep and craggy; and the gulphs and bays, which are formed by theſe mountains, afford a ſafe harbour for veſſels of any burthen in the worſt weather.

The *Kurilſkaya Lopatka*, which by the natives is called *Kapoore*, 103 is the ſouthernmoſt point of the cape of *Kamtſchatka*, and 133 divides the eaſtern from the *Penſchinska* ſea: it takes its name from its reſemblance to a man's ſhoulder-blade. Mr. *Steller*, who has been upon the *Lopatka*, ſays, that the place is not more than 10 fathoms above the ſurface of the ſea, and for that reaſon is ſubject to great inundations, ſo that for 20 verſts from thence no-body lives, except thoſe who come there in the winter to catch foxes; and when the ice is carried thither with the beavers on it, then the *Kuriles*, who follow this ice along the ſhore, aſſemble here in great multitudes. Within three 134 verſts from the *Lopatka* nothing grows except moſs; and there 137 are neither rivers nor ſprings, only a few lakes and pools. The ſoil conſiſts of two layers, the lower is ſtrong, and the upper ſpongy; and its ſurface is full of hillocks, and uſeleſs. The firſt rivulet 133 falling into the *Penſchinſka* ſea, is called the *Utatumpit*; two verſts from the *Utatumpit*, the rivulet *Tapgutpan* runs into the ſea, upon which ſtands a ſmall fort called *Kochinskoy*; and three verſts from thence is the *Pitpuy*, or *Ozernaya*, which runs out of a conſiderable lake divided from the ſea by a mountain. The *Ruſſians* call this river *Kambala*, or Flounder River, becauſe great numbers of flounders are caught in the mouth of it.

/33 The lake out of which it runs, and the mountains which lie between it and the ſea, are called by the ſame name. Near the *Kambalinſkoy* lake is built *Kamabalinſkoy*, a ſmall *Kurilſkoy* fort. From the *Kurilſkoy* lake, towards the ocean, ſtrait to the *Awatſcha*, is not above 19 *German* miles; but the road is exceſſively difficult; for you muſt paſs over eleven high mountains, and ſome of them are ſo ſteep that travellers are obliged to let themſelves down with ropes.

About this lake are ſeveral remarkable mountains; particularly two, one on each ſide of it, which emit ſmoke, and have done ſo many years; and which Mr. *Steller* ſays he ſaw in his journey from the *Yavina* to the *Ozernaya* river.

Though I went as far as the river *Ozernaya* in 1738, yet I did not ſee thoſe mountains, and only obſerved hot ſprings in two different places. Theſe ſprings run within 20 verſts from its mouth, ſome of them into the river *Pauſtia*, and others into the river *Ozernaya*, both of them on the ſouth ſide of it.

The river *Apanach* is reckoned the boundary of the province of *Kurilſkoy*. It runs from under the mountain called *Opalſkaya Sopka*, which is 85 verſts from the ſea, and excels all the reſt of the mountains about the *Penſchinſka* ſea both in height and fame; particularly on this account, that it can be ſeen by ſeamen from both ſeas, and ſerves them for a land-mark.

The ſhore from the *Lopatka* almoſt to the *Kambalina* is low. From the *Kambalina* to the *Ozernaya* is ſo mountainous and ſteep, that one cannot go near the ſea.

From the *Ozernaya* to the *Opala* it is likewiſe mountainous, but more upon a level.

From the *Opala* to the Great River is an extenſive plain, ſo that not one hill is to be obſerved near the ſea. After paſſing a great number of rivulets, all of which ariſe out of a range of mountains,

called *Stanovoy* ridge, we come to the river *Geek*, called by the 103
Coſſacks *Vorovſkaya*, or Rogue's River, becauſe the *Kamtſchadales* 133
who live upon it were frequently concerned in inſurrections, and uſed to kill the tax-gatherers treacherouſly. From hence we meet nothing worth notice 'till we come to a *Kamtſchatkoi* fort, called *Tackauta*, in which travellers uſually equip themſelves for paſſing the ridge. Here the common road lies near a rivulet, from the head of which it paſſes the *Stanovoy* ridge, 'till it deſcends to the heads of the river *Keergena*, which falls into the *Kamtſchatka*.

From the *Keergena* we paſs up the river *Kamtſchatka* to the 133
Kamtſchatkoi fort. The country between the little fort *Tackauta* and the *Stanovoy* ridge is a deſert of 110 verſts in extent, and from the ridge to the upper *Kamtſchatkoi* fort is 65, the land equally barren.

The above road is very difficult and dangerous, for a great part 133
of it lies on the river, which, from the rapidity of its current, in 487
many places never freezes. Travellers are obliged, therefore, in ſome parts to keep cloſe to the ſides with great care; for if the ice breaks nothing can ſave them, the rocks on the banks in ſeveral places being ſo ſteep that it is impoſſible to get on ſhore, and the river runs ſo ſwiftly that you are immediately driven under the ice. The ridge is paſſable only in calm and fair weather, for which we are obliged to wait ſometimes ten days or more; at other times it is impoſſible to find the way, and we muſt inevitably fall down the precipices, and be loſt. The propereſt time to paſs is when no clouds are to be ſeen on the top of the ridge, for even the leaſt cloud is a ſign of a great ſtorm there. To croſs over this ridge takes up a whole winter's day. The greateſt danger is in paſſing over the very top, which is called by the Coſſacks, *Greben*, or a comb. Its breadth is 30 fathoms; it is like a boat with the bottom upwards, the aſcent on both ſides being

/133 very ſteep. The paſſage is troubleſome even in the calmeſt weather, 487 for the road falling off leaves nothing but ice: the *Kamtſchadales*, 481 therefore, in order to paſs it in ſafety, have under their ſnow-ſhoes, two nails; yet theſe are of ſmall ſervice if the wind overtakes them there, for they are frequently carried from one ſide to the other to the great hazard of their lives, or at leaſt of their limbs. Beſides which, this paſſage is attended with the danger of being ſmothered in the ſnow, the narrow path lying between high, and almoſt perpendicular, mountains, from which the ſnow falls in heaps upon the leaſt motion. This is a danger, indeed, unavoidable in every place where the road lies in narrow and deep vallies.

In mounting the ridge all muſt walk, for the dogs can hardly aſcend it even with the light baggage; but in deſcending it is otherwiſe, for then they only leave a ſingle dog in the ſledge: the reſt are taken out, it being impoſſible to manage them all in ſuch a road. Although this paſſage of the ridge be ſo difficult, yet, as it is the uſual road to *Kamtſchatka*, one may conclude that any other paſſage from ſea to ſea muſt be ſtill more difficult and dangerous.

/133 The coaſt from the mouth of the Great River to the river *Puſtaia*, as far as the *Shaback*, is ooze and ſoft mud, ſo that many veſſels have been thrown upon it without receiving any hurt. From the *Shaback* the ſhore begins to be bolder, though not rocky; but from the *Tulaban* river it is mountainous, rocky, and dangerous to ſeamen.

600 The late deſcriptions of the ſhore of the *Penſchinska* ſea, from the *Leſnaya* to the *Penſchina* and to the *Ochotska*, are more particular than the former: for in the year 1741 a high road was eſtabliſhed to *Kamtſchatka* with poſt-houſes at proper ſtations; yet, with regard to the diſtances of places, they are not much more accurate; ſince there were no aſtronomical obſer-

vations made, nor the diſtances meaſured: nor are there any hopes of its being ſoon done, as travelling in thoſe parts is very dangerous; the wild *Koreki* oppoſing the *Ruſſian* government, and frequently committing murders upon ſmall parties that paſs that way; and though ſometimes they appear friendly, yet travellers are always obliged to be ſo much upon their guard againſt the deceit and cruelty of ſuch a barbarous race, that they have no time to make accurate ſurveys. Beyond the *Puſtaia* is the river *Talouka*; 50 verſts from which is the river *Penſchina*, remarkable for giving name to the *Penſchinſka* ſea. Thirty verſts from the ſea is built a ſmall fort, called *Acklanſkoy*, from the river *Acklan*, which falls from the right ſide into the river *Penſchina*. Here ſome *Ruſſian* Coſſacks live for the diſpatch of the poſt, and to bring into ſubjection the *Koreki* that refuſe to pay taxes. The firſt houſe was built there in the year 1679, ſince which certain ſoldiers were ſent there to gather the taxes; but afterwards, on account of the great diſtance and danger of the place, it was abandoned. This ſpot has been made remarkable by the murder of two commiſſaries, with a party of Coſſacks, many years ago, who conveyed the tribute from *Kamtſchatka* to the *Anadirſk* fort.

From the river *Talouka* to the mouth of the *Penſchina* the ſea coaſt lies north-eaſt; thence it turns ſouth-weſt as far as the rivulet *Gogulan*; after which the coaſt turns to the eaſt, 'till we approach the river *Ocbotſka*: the interval between which laſt and the *Penſchina* is watered with ſeveral rivulets that run into the *Penſchinſka* ſea, for whoſe names we refer to the map. The *Cuchtai* river falls into the *Ocbotſka* very near the ſea: between them is a conſiderable bay, in which veſſels may anchor. The river *Cuchtai* is particularly remarkable for its port, and for the great quantities of Larch trees, and other ſorts of wood fit for building veſſels for navigation, which grow on its banks, and which are not found in ſo great plenty along the river *Ocbotſka*. The

river

1:Krasheninnikov N-5 . (1736-40) 1764 Kamchadal

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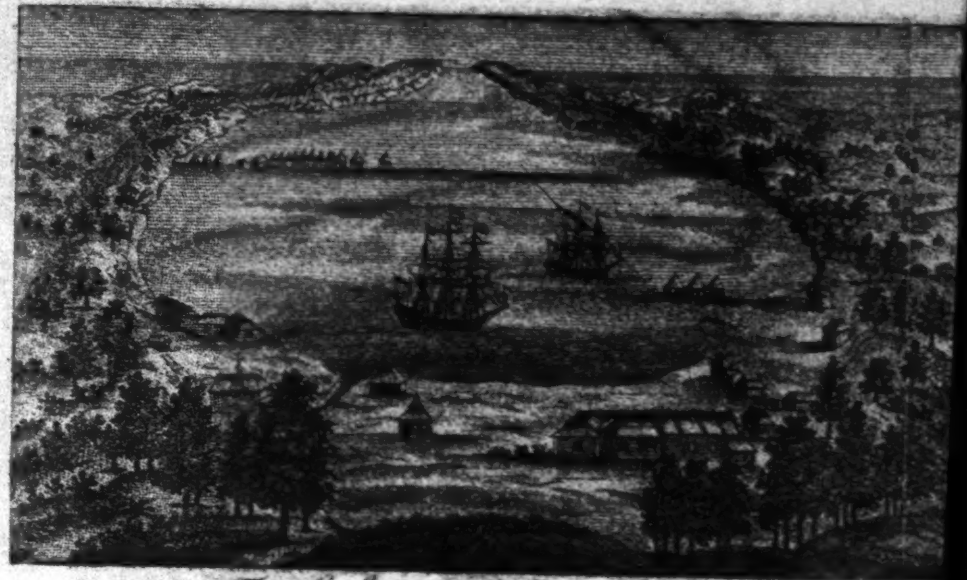
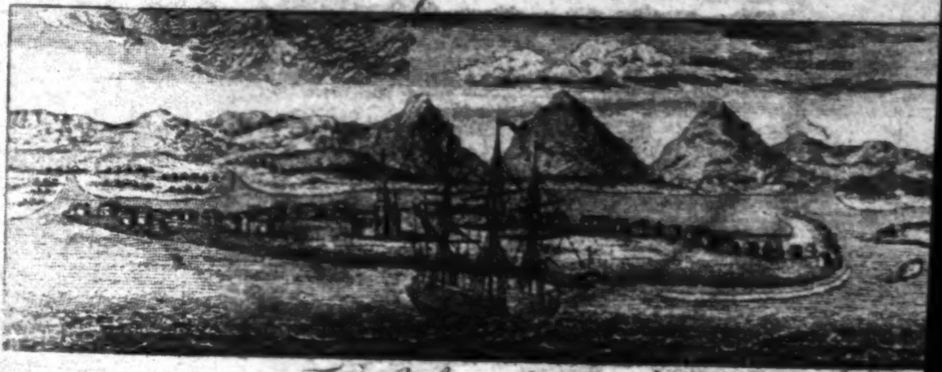


The Harbour of S.t Peter and S.t Paul.

See Page 22.



The Harbour of Ochotsky.

facing p. 24

000 river *Ochotſka* has three mouths; the New mouth, the Old mouth, and the *Bulginſkaya* out-let.

The New mouth is dry, except at the time of a great inundation; and even then veſſels cannot enter it. The preſent
Ochotſkoy fort is built between the New and Old mouths, almoſt
upon the beach; and the former, which is now called the old
631 fort, was ſix verſts from the ſea. This place is called *Ochotſkoy*
651 poſt, and commonly *Lama*; and has under its juriſdiction all
R *Kamtſchatka*, and the coaſt of the *Penſchinska* ſea to the frontiers
177 of *China*. For which reaſon the tax-gatherers are all ſent out
65 from hence; and the tax, when gathered, is immediately brought
from all other places hither, where it is firſt appraiſed, and then
ſent into *Jakutzk*. Formerly the *Ochotskoy* fort was poorly inhabited, and under the juriſdiction of *Jakutski*, but it is much increaſed ſince the *Ruſſians* have made this the port for their paſſage by ſea to *Kamtſchatka*.

000 This place is better built than any of the other forts, the houſes being good and regular, particularly thoſe belonging to the government, in which the officers of the *Kamtſchatka* expeditions reſided. In my time there was neither a church nor a fortification, but they were building both. Though the country be as barren as *Kamtſchatka*, yet its inhabitants are better furniſhed with every thing, becauſe goods and proviſions brought from *Jakutski* are ſold here cheaper by one half. Though plenty of corn is brought here, yet no freſh meat is to be got, except wild fowl and veniſon, and that ſeldom. Fiſh in this place is almoſt as plenty as in *Kamtſchatka*, except the *Chaveecha*, which they bring hither from thence. The greateſt want in this place is that of good paſturage near them; therefore the inhabitants cannot breed cattle. They have tried many times to keep them upon the river *Avi*, but with great loſs, moſt of them dying for want of ſuſtenance. Time will ſhew whether the *Jakutski* people, that are ſettled along the rivulets which fall into the

Ochotska,

000 *Ocbotska*, be more ſucceſsful. The want of cattle, in ſome meaſure, is made up by the deer, which the natives have in greater plenty than in *Kamtſchatka*; but theſe are more uſed for carriage than food. They alſo travel with dogs, but not ſo commonly as in *Kamtſchatka*.

There were four tranſport-veſſels built here: namely; the Fortune, in which in the year 1737 I went to the Great River, and which was loſt ſoon after; the boat Hauriel, which was uſed alſo in long ſea voyages for ſome time; the Galliot *Ocbotska*; and a ſmall veſſel, which was not then launched. 651 R 177 .65 The paſſage by ſea uſed formerly to be only once a year; namely, in the autumn, when the tax-gathers went from *Ocbotſky* to *Kamtſchatka*, and brought back the tax the next year: but now they go oftener.

000 The paſſage from the *Ocbotska* to the Great River is directly ſouth-eaſt. Between the fort *Ocbotskoy* and the river *Amur*, whoſe heads are in the *Ruſſian* dominions, the following rivers run into the ſea: the firſt is *Urack*, 24 verſts from the *Ocbotska*. It is to be obſerved, that in the time of the *Kamtſchatka* expeditions the proviſions were uſed to be ſent down this river upon flat-bottomed boats to the *Ocbotska*; for which reaſon they built a dock 50 verſts from its mouth, where the ſailors and the *Ocbotſkoy* Coſſacks uſed to build veſſels for the above expeditions, and ſend the ſaid proviſions from the *Iudomſkoy* Kreſt, or croſs, to that place over land by horſes or deer in ſledges. But this way of carriage by water was attended with great trouble, loſs of time and people; for the river is very rapid, rocky, and full of cataracts, and not always deep enough, except in the ſpring, or after great rains: and as theſe additional waters run ſoon off, they are obliged to watch every opportunity of ſending down the loaded veſſels; which if they omit, they muſt often wait a long time.

There never was a fleet ſo happy in this navigation as not to loſe ſome veſſels either by rocks or cataracts, many of which are ſo dangerous, that a *Siberian* ſoldier, who ventured to be a pilot there, was made a ſerjeant for it. One may judge of its great rapidity by this, that captain *Walton* went down the river from the *Urackſkoi* dock to the mouth in 17 hours, notwithſtanding the many ſtops he met with in paſſing the cataracts, and relieving the other veſſels which had ſtruck on the ſhoals.

Thirty verſts from the *Urackſkoi* dock, up the river *Urack*, is built a ſmall cuſtom-houſe; at which all paſſengers are ſearched for brandy, china, tobacco, and other contraband or ſmuggled goods.

The river *Urack* falls into a bay called by its name, which extends along the ſhore two verſts: its breadth is 200 fathoms. From hence, 'till we come to the *Ude*, nothing of moment occurs; on the nothern bank of this river ſtands the fort *Udeſkoy*, about ſeven days' voyage by water from its mouth, and we may reckon 10 or 12 verſts for each day's journey, as is generally allowed. The buildings in it are a church of St. *Nicholas*, the tax-office, and 10 houſes of the inhabitants. This fort is under the juriſdiction of *Jakutſki*, from whence the tax-gatherers are ſent.

The *Tunguſi*, who pay their taxes in here, are reckoned ſix nations; and their taxes amount every year to 85 ſables and 12 foxes' ſkins. Formerly only people that were in the ſervice of the government lived in this fort; but in the year 1735 a colony of 10 families of boors were ſettled there to eſtabliſh agriculture. But it is ſaid there are no hopes that corn will grow in theſe places, the ſoil being quite improper for cultivation.

Near the *Mamkinſkay* Noſs, and oppoſite to a large bay which abounds with whales and ſeals, lies *Medveſkuy*, or the Bear's iſland: it is about 10 verſts in length, and ſix in breadth, at about a day's ſail on the eaſt. South of the Noſs lies the iſland *Theocliſtove*, which uſed formerly to be reſorted to in winter by the hunters. This iſland abounds with rocks and woods, in which are ſables and foxes, The *Shantanskoy* iſland is larger than *Theocliſtove*. *Shantura* is three day's journey by land from north to ſouth; and the boats are three days and a half in coaſting it.

The former of theſe iſlands abounds not only in wood, but alſo in different ſorts of animals; particularly foxes, ſables, ermines, and bears. The principal birds are ſwans, ducks, and geeſe. Several ſorts of fiſh are found in the bay; and different kinds of berries in the fields. Half a day's ſailing ſouth from the *Shantanskoy* is an iſland, in length and breadth about 12 verſts, called *Hoodee Shantar* (that is, unprofitable); ſo named, becauſe there grows no ſort of wood upon it, though it has not been long in this ſtate, for formerly there was wood enough, and many ſables were caught there; but being burnt through the negligence of the *Gilijacks*, who left their fires unextinguiſhed, it is now nothing but a bare mountain, and all the animals have left it. South from the *Hoodee Shantar*, in half a day's time, they go in boats to the *Belochay* iſland, which is equal in ſize to the former. This iſland abounds in woods, ſtocked with many animals, eſpecially ſquirrels, from whence it took its name.

The reſt of the coaſt has nothing worth remarking, 'till we come to the river *Amur*, or, as it is called, *Sagalin Ula*, being the laſt great river which comes within our notice.

This river riſes in the *Ruſſian* territories, and, according to the *Chineſe* maps, falls into the ſea, at the point of a large bay, in 52° 50′ north latitude. This bay lies between the *Dulangada* Noſs and the *Vaſipunu* Noſs. From the *Vaſipunu* Noſs is the neareſt paſſage to a great and inhabited iſland, which extends from the north-eaſt to the ſouth weſt 4° 30′: the channel is 30 verſts over. The coaſt from the river *Ude* to the *Amur*, excepting the capes and promontories, lies almoſt directly north and ſouth.

000 Having deſcribed all the coaſt and principal rivers on the continent, we ſhall now proceed to deſcribe the principal roads through this country.

CHAP. II.

Of the ROADS *in* KAMTSCHATKA.

487 491 FROM the *Bolſcheretskoi* to the upper *Kamtſchatkoi* fort are three principal roads: the firſt, along the *Penſchinſky* ſea; the ſecond, by the Eaſtern Sea; and the third, by the *Biſtroy*.

By the firſt they go up the river *Oblukomina* to the ridge *Oblukominſkoy*, and over the ridge to the river *Keerganick*, along which almoſt to the river *Kamtſchatka*, and from thence up the river to the upper *Kamtſchatkoi* fort.

By the ſecond they go from the *Bolſcheretskoi* up the Great River to the *Nachikin* fort, and croſs a ſmall ridge to the river *Awatſcha*, to the haven of *Petropaulauſkay*, or of *Peter* and *Paul*; and from thence along the coaſt of the Eaſtern Sea north to the river *Shupanova*, and up that river to its head; from whence over the ridge to the river *Poweecha*, and down the mouth of that river, which is over-againſt the upper fort.

The third road lies from the *Bolſcheretskoi* up the Great River to the *Opachin* fort; from thence through plains to the Rapid River, up to its head; and thence, down the river *Kamtſchatka*, to the upper *Kamtſchatkoi* fort.

They travel the two firſt roads chiefly in winter; the third, on foot in ſummer. The firſt and the laſt roads are meaſured, but the ſecond is only meaſured half way; and the particular diſtances are here adjoined.

First road from the *Bolſcheretskoi* fort, by the *Penſchinſky* ſea.

	verſts	fathoms
From the *Bolſcheretskoi* office to the *Zaeemka*, or the eſtate of Mr. *Trapeznicoff*,	2	100
From thence to the river *Utka*,	21	200
From thence to the *Kiechchiek*, to the *Akabeeſhevo*,	42	250
From thence to the *Nemtick*	25	0
From thence to the *Kole*	22	0
From thence to the *Vorovſkaya*	51	0
From thence to the *Brewmka*	24	0
From thence to the *Kompucovoy*	13	0
From thence to the *Krootoborowa*	36	0
From thence to the *Oblukomina*, to the ſettlement of *Tarein*,	24	0
From thence to the *Oblukominſkoy* ridge	110	0
From thence to the upper *Kamtſchatkoi* fort	65	0
	486	50

Second road from the *Bolſcheretskoi* fort, by the Eaſtern Sea.

From the *Bolſcheretskoi* fort to the ſmall fort *Opachin*	44	0
From thence to *Nachikin*	74	0
From thence to the *Awatſcha* and the *Paratunka*	68	0
From the *Paratunka* to the *Petropaulauſkaya* haven	16.	0
From thence to the rivulet *Calabturka*	6	0
From thence to the fort *Nalachewa*	34	0
In all from *Bolſcheretskoi* to the ſmall fort *Nalachewa*	242	0

491 From the river *Nalacheva* they in ſix days arrive at the upper ſort.

Third road from the *Bolſcheretskoi* fort, by the Rapid River.

	verſts	fathoms
From the *Bolſcheretskoi* fort, up along the Great River, to the *Opachin* ſmall fort ——	44	0
From thence to the upper ford ——	33	0
From thence to the ſettlement of *Abanichevo*	22	0
From thence to the ſettlement of *Ganaline*	33	0
From thence to the head of the *Kamtſchatka*	41	0
From thence to the upper *Kamtſchatkoi* fort	69	0
In all from the *Bolſcheretskoi* to the upper *Kamtſchatkoi* fort —— ——	242	0

485 In all the places expreſſed in the tables the travellers take up lodgings at night, except where the diſtance is only five or ſix verſts. Notwithſtanding the great diſtance between the *Oblukominſkoy* and the upper *Kamtſchatkoi* fort, in good weather they travel it in three days, lying two nights in deſert places.

487
491 There are other roads from the *Bolſcheretskoi* to the upper fort, both from the *Penſchinſka* ſea and from the Eaſtern; for every river there that falls into either of thoſe ſeas has a paſſage to *Kamtſchatka:* but, as nobody except the *Kamtſchadales*, and ſometimes the Coſſacks, in great neceſſity, travel them, it was not thought material to deſcribe them; nor can one well aſcertain the diſtances by their journeys.

They go from the *Bolſcheretskoi* to the lower *Kamtſchatkoi* fort, either through the upper *Kamtſchatkoi* fort, or by the coaſt of the Eaſtern Sea. From the upper *Kamtſchatkoi* fort the way is along the river *Kamtſchatka*, except where the river makes great windings. The diſtance from the upper to the lower *Kamtſchatkoi* fort is laid down in the following table. 491

	verſts	fathoms
From the upper *Kamtſchatkoi* fort to the river *Keergena*	24	0
From thence to the ſmall fort *Maſhurin*	32	0
From thence to the ſmall fort *Nuchikin*	87	0
From thence to *Golka*	33	0
From thence to the ſmall fort *Talecheva*	26	0
From thence to the *Uſhky*	16	0
From thence to the *Krewky*	25	0
From thence to the *Kreſtee*	25	0
From thence to the *Gorboon*	26	250
From thence to the *Harchin*	11	0
From thence to the *Camenoy* ſmall fort	27	0
From thence to the *Cavanackey*	16	0
From thence to the *Kamack*	6	0
From thence to the *Hapick*	8	250
From thence to the *Schockey*	9	0
From thence to the *Obooboſſs* ſettlement	17	250
From thence to the lower *Kamtſchatkoi* fort, to the church of St. *Nicholas*,	7	250
In all from the upper to the lower fort	397	0
And from the *Bolſcheretſkoi*	833	50
	1230	50

The other road from the *Bolſcheretſkoi* to the lower *Kamtſchatkoi* fort being meaſured only to the *Nalacheva* fort, it cannot exactly be known which is the neareſt way; but one may imagine that there is not much difference between them. 485 491

The

485 The chief places on that road where they uſually lodge at night are the ſmall forts of *Opachin*, *Nachiekiek*, and the *Tarein*; the haven of *Peter* and *Paul*, which was formerly called the ſmall fort *Auſtin*; the *Oſtrovenaya* river, *Supanova*, and the *Chazma*; upon all which rivers there are *Kamtſchatkoi* habitations.

487 From the *Chazma* to the river *Kamtſchatka* the road lies over
491 deſolate mountains; and they come upon the river juſt by the
village *Obooboffs*, ſeven verſts and a half above the lower *Kamtſchatkoi* fort, lodging but one night in a deſert place.

From the lower *Kamtſchatkoi* fort to the northern parts two roads are made, the one is by the *Elouki*, to its head; and from thence over a ridge to the head of the river *Tegbil*, along which they go quite to the ſea; and from thence, not far off from the ſea, to the rivers *Leſnaya* and *Podkargirnaya*.

In a moderate way of travelling, when there is no hindrance from bad weather, they go from the lower *Kamtſchatkoi* fort to the lower *Tegbilſkoy* ſmall fort, called *Shipin*, in 10 days.

By the ſecond road they may travel in the ſame manner to the river *Karaga* in ten days, whoſe head is near the river *Leſnaya*.

From the upper *Kamtſchatkoi* fort to the *Tegbil* the common road is by the river *Elouki*: firſt, over the ridge to *Oblukominſkoy* fort, and from thence north by the *Penſchinsky* ſea; and another road is by the river *Kreſtovaya* to the *Harbooſova*.

By the firſt road they may reach *Tegbil* in 10 days; but they very often lodge the tenth night on the road, not ſo much on account of the diſtance as the badneſs of the roads, and the very mountainous places over the *Utkolotskoy* cape. The ſecond road requires 11 or 12 days.

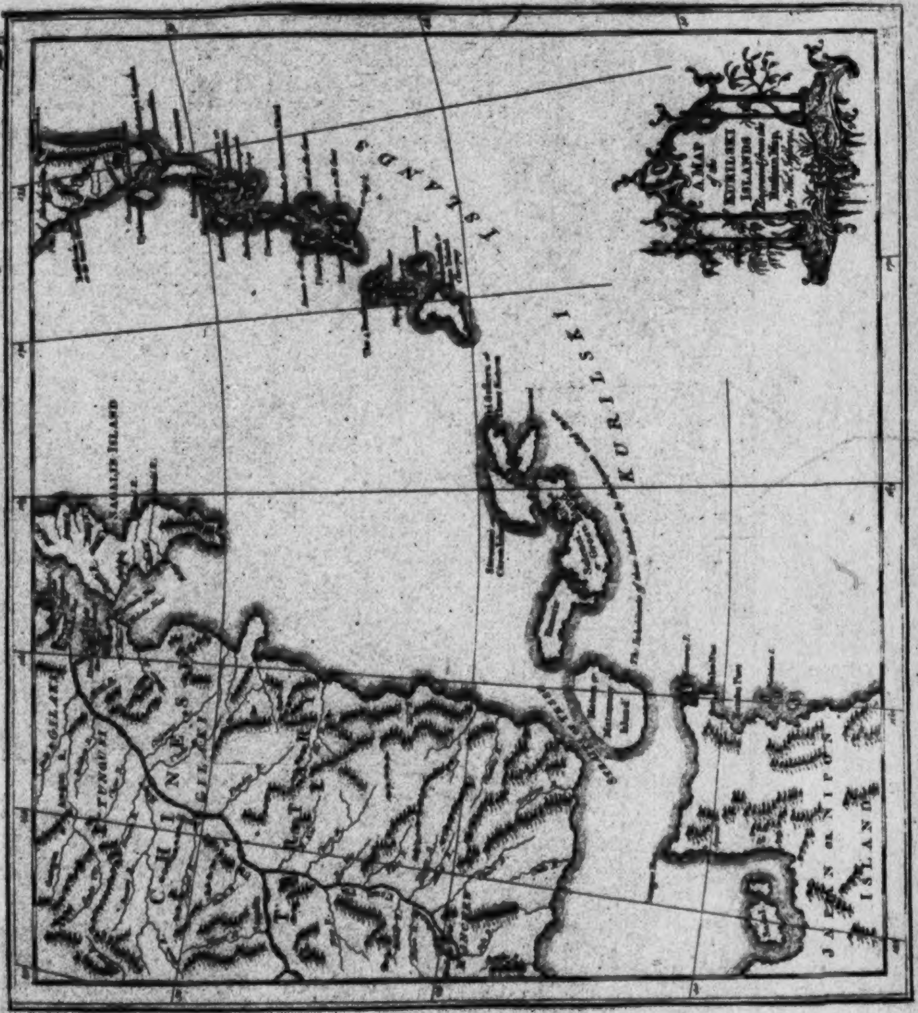
The paſſage along the *Elouki* to the *Tegbil* is the longeſt of all, for that requires above 14 days' journey.

From the *Bolſcheretskoi* fort ſouthward to the *Kurilskaya Lopatka* the uſual paſſage is nine days. The diſtance from the

Bolſcheretskoi

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

102


A MAP
of the
KURILSKI
ISLANDS
Drawn from the
Russian Map,
by Thos. Jefferys.
TUNGUSI
CHINESE
GILAKI
TARTARY
SAGALIN ISLAND
KURILSKI ISLANDS
JAPAN OR NIPON
ISLAND

facing p. 33

491 *Bolſcheretſkoi* fort to the *Kurilskaya Lopatka* is 210 verſts 300
487 fathoms, which ſpace may be eaſily travelled, even in four days; but the Coſſacks of thoſe places have a cuſtom of ſtopping at any ſmall fort, under pretence of ſome buſineſs there, though their moſt probable motive is to refreſh their dogs. At a middling rate I have travelled in three days from the *Kamtſchatkoi* to the *Bolſcheretskoi*, which is near 150 verſts.

	verſts	fathoms
From the *Bolſcheretskoi* fort to the mouth of the Great River — — —	33	0
From the mouth, along the ſea-ſhore, to the river *Opala* —— ——	85	0
From thence to the *Koſhubochiek* —	18	0
From thence to the *Yavina* ——	15	0
From thence to the river *Ozernaya* —	15	0
From thence to the *Kambalina* —	36	300
From thence to the *Lopatka* —	27	0
In all from the *Bolſcheretskoi* to the *Kurilskaya Lopatka* —— ——	210	300

CHAP. III.

Of the KURILSKI ISLANDS.

10
131 UNDER the name of *Kurilski* iſlands are underſtood all thoſe iſlands which extend from the *Kurilskaya Lopatka*, or the ſouthern end of *Kamtſchatka*, in a row ſouth-weſt quite to *Japan*. They derive their names from the inhabitants of thoſe iſlands which lie neareſt to *Kamtſchatka*, who are called by

103 the natives *Kuſhi*, and by the *Ruſſians Kuriles*. The exact
131 number of thoſe iſlands cannot be aſcertained; but, according to the verbal accounts which were gathered from the *Kuriles*, and the natives of the ſouthernmoſt iſlands, and from the *Japaneſe*, who were driven by diſtreſs of weather upon the coaſt of *Kamtſchatka*, they are reckoned to be twenty-two. Perhaps they do not take the ſmall ones into this number: for by the account of captain *Spanberg*, who went as far as *Japan*, there appears to be a great many more; but as the ſaid captain found it difficult to give them *Ruſſian* names, all of them that had any relation to the *Kurilskoy* names, except the two that lay neareſt to *Matma Kunatin*, were allowed to keep their former appellations.

133 *Schumtſchu* is the neareſt iſland to the *Kurilskaya Lopatka*,
136 and extends in length from the north-eaſt to the ſouth-weſt
161 50 verſts, and in breadth about 30. This iſland is full of
651 mountains, out of which, as alſo from the ſmall lakes and marſhes, many little rivers run into the ſea. In ſome of them are found different kinds of ſalmon, and ſeveral other fiſh, but not in ſuch plenty as to furniſh the inhabitants with proviſions for a winter. Upon the ſouth-weſt point, near the ſtreight that is between this and the ſecond *Kurilskoy* iſland, are three *Kurilskoy* ſettlements, that contain only 44 inhabitants; ſome of whom pay the taxes in ſables and foxes, but the majority pay them in ſea-beavers' ſkins.

The inhabitants of this iſland, as well as thoſe of the *Kurilſkaya Lopatka*, are not the right *Kuriles*, but are of the race of the *Kamtſchadales*: for ſome diſſentions having ariſen between the inhabitants of that nation, ſoon after the *Ruſſians* entered the country, a large party of them retired here and to the *Lopatka*; where they became connected, by mutual inter-marriages, with the people of the ſecond iſland, whoſe particular cuſtoms they have adopted, and from thence have received the name of *Kuriles*.

The channel between the *Kurilskaya Lopatka* and this iſland 133
is 15 verſts in breadth; over which they paſs in ſmall boats, 123
when the weather is fair, in three hours. This paſſage requires 782
not only fair weather, but likewiſe a flowing tide. In the time 777
of the ebb, the waves ſpread for ſome verſts, are rapid and
white, and ſo large that even in calm weather they riſe two
or three fathoms high. Both the Coſſacks and *Kuriles* have a
ſuperſtitious awe and veneration for theſe waves; and when they
row over them, offer them a ſacrifice by throwing chips made
on purpoſe, imploring a ſafe paſſage; the pilots alſo uſe conjurations
the whole way.

The ſecond *Kurilskoy* iſland, *Paromuſir*, is twice as large as 133
the firſt. It lies north-eaſt and ſouth-weſt, and is ſeparated
from the firſt by a channel two verſts broad, where one veſſel
may lie in time of neceſſity, but not without danger, there
being no proper place for anchorage: and if a veſſel parts
from her anchor, ſhe will be in very great danger; for the
ſhore here being ſteep and rocky, and the channel narrow, it
is next to impoſſible for her to eſcape. There was a melancholy
example of this in the year 1741, when one of our veſſels was
caſt away here. This iſland is alſo mountainous, and has as 137
many lakes and rivulets as *Schumtſchu*; and on both of them, there 372
is no other timber than *Slanetz* and *Ernick* which are uſed by 313
the inhabitants for fuel, and they build their huts of different 342
kinds of wood which they find thrown on the ſhore
by the waves from *America* and *Japan*; among theſe are
ſometimes found pieces of ranfarn wood, of which ſeveral large
one's were brought thence to me. The inhabitants of this [101]
iſland are right *Kuriles*, who came there from the iſland 177
Onneckoot; but upon what account is not known. All 439
affirm, that between the inhabitants of the two above-mentioned
iſlands, and the moſt remote, commerce was formerly eſtabliſhed

177 ed: thoſe of the remote iſlands brought to them all ſorts of
439 lackered wooden ware, ſcymitars, ſilver rings which they wear in their ears, and cotton ſtuffs; and from them in return, they uſed to take chiefly, eagles' feathers, which are uſed in ornamenting their arrows: this ſeems very probable; for I had from this iſland a lackered waiter, a baſon, a *Japaneſe* ſcythe, and a ſilver ring; all which I have ſent to the *Imperial* Chamber of curioſities. Theſe articles the *Kuriles* could have from no other place than from *Japan.*

361 The *Kuriles* of this iſland[1] have their habitations near the ſouth-weſt point, upon a lake five verſts in circumference, out of which a ſmall rivulet, called *Petpu*, runs into the ſea.

133 Both theſe iſlands are ſubject to frequent and terrible earthquakes, and inundations: one of theſe calamities happened in the year 1737, about the time of my coming to *Kamtſchatka*; and another in *November*, 1742. We ſhall relate the firſt circumſtantially in its proper place; but as for the ſecond, though it was great, yet I have not been informed of the miſchief and deſtruction it occaſioned; for it happened after my departure from *Kamtſchatka*; and Mr. *Steller* makes no mention of it in his account.

The third *Kurilskoy* iſland is called *Sirinki*, and lies ſouth-weſt of *Paromuſir*. The fourth iſland is called *Onnecutan*. This iſland is leſs than *Paromuſir*, and lies from north-eaſt to ſouth-weſt, as that does, from which they row to it in one day.
101 It has many inhabitants of the ſame origin with the *Kuriles*
651 of *Paromuſir* iſland, as was ſaid before, out of which ſome families go over to viſit the inhabitants of *Paromuſir*, and vo-
651 luntarily pay a tribute in beavers and foxes. The author concludes from this, that the reſt of theſe iſlands would not refuſe to pay the tribute, if proper perſons were ſent to bring them under ſubjection; and give them aſſurances, by

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[1] [Parmushir]

kind repreſentations, of the clemency of her Imperial majeſty, 651
with promiſes that ſhe would protect and defend them from their enemies.

Neither I nor Mr. *Steller* could have an oppportunity to in- 133
form ourſelves particularly of the reſt of the *Kurilski* iſlands; therefore we ſhall give the accounts of them that were communicated to me by Mr. *Muller*, which he had from the *Japaneſe*, who were ſhipwrecked upon the coaſts of *Kamtſchatka*.

Between Mr. *Muller*'s account and our's, there is ſome difference; for in his, *Onnecutan* is called the ſixth iſland. However this might happen only on account of his reckoning the ſmall iſlands alſo, which the *Kuriles* do not. According to his deſcription, beyond the *Paromuſir*, or the ſecond *Kurilskoy* iſland, there are three more iſlands; *Sirinki* is reckoned the third; *Uyakoopa*, the fourth; and the *Kukumita*, or *Cucumiva*, the fifth; the *Sirinki* and *Kukumita* are ſmaller than *Uyakoopa*, which iſland is remarkable for a high mountain. The ſaid iſlands are placed in a triangle; the *Uyakoopa* lying moſt north, and fartheſt weſt; and the *Sirinki*, with regard to the former, ſouth-eaſt, and in the ſame longitude with *Paromuſir*; and the *Kukumita* a little farther ſouthward than the *Uyakoopa*. It ſeems that theſe iſlands in the General *Ruſſian* map are expreſſed under the names of *Diacon*, *St. Iliab*, and *Galanta*, which are placed in a triangle, though their ſituation is not exactly the ſame as in the above deſcription. The ſixth *Kurilskoy* iſland, according to Mr. *Muller*, is called *Muska* and *Onnecutan*. The ſeventh is *Araumakutan*, is uninhabited, and there are ſome burning mountains as in *Kamtſchatka*. On the eighth iſland *Sujaskutan*, which is as large as the former, ſome few people inhabit who are not taxed. From this iſland to the weſt lies the ninth called *Emarka*; and thence on the ſouth-weſt ſide is the tenth iſland *Maſhachu*, which is ſmall and uninhabited; and on the ſouth-eaſt ſide from the *Sujaskutan* there is a ſmall iſland *Ebachu*, which is reckoned the eleventh.

The

133 The twelfth iſland *Shockoeki* lies on the ſouth ſide, and ſo
diſtant from the *Sujaskutan*, that they can hardly row to it in
half a day, even when the days are longeſt, in the lighteſt boat.
It is ſaid, that the *Japaneſe* carry ore from it in large veſſels;
but what ore is not known. The thirteenth iſland, and
the following to the ſeventeenth, are called *Motogo*, *Shatovo*,
Utitir, *Kituy*, and *Shimutir*. The *Utitir* lies ſomewhat to the
eaſt, and the reſt in one line ſouth. The channels are croſſed in
light boats, in leſs than half a day, but the paſſage is exceſſively
difficult, becauſe the tide runs very rapid in all of them; and,
when it happens to be a ſide wind, theſe ſmall veſſels are driven into
the ſea, and loſt; and for this reaſon the inhabitants of all theſe
iſlands paſs and repaſs theſe places early in the ſpring in calm
weather. The *Motogo*, *Shatovo*, and the *Utitir* iſlands have
nothing remarkable in them. On the iſland *Kituy* grow the
161 reeds of which they make their arrows. The *Shimatir* is larger
than the reſt, and has many people on it, who reſemble the *Kuriles*
of the firſt three iſlands in all reſpects, but are not under
the *Ruſſian* government, nor any other foreign power. The
navigators who were ſent by *Peter the Great*, only ſaw this
iſland, beyond which no *Ruſſians* ever were until the ſecond
Kamtſchatkoi expedition.

133 The *Cheerpuy* is reckoned the eighteenth of the iſlands. It lies weſt at the mouth of the channel. On this is a very high mountain, but no inhabitants. Some people come there from the other iſlands to catch fowls and dig roots. The people of *Kituy* have ſometimes heard firing of cannon on this iſland, as they relate, but on what account they know not. They likewiſe report, that formerly a *Japaneſe* veſſel was loſt upon it, whoſe people were taken by the inhabitants of the next iſland, and were ſent to *Japan* to be redeemed.

000 The channel which divides the iſland *Shimutir* from the nineteenth iſland *Eturpu* is ſo broad, that one cannot ſee one

iſland from the other; but from thence to the twentieth iſland 000 *Urupe*, and from that again to the twenty-firſt *Kunatir*, the channels are much narrower.

The twenty-ſecond and the laſt iſland near *Japan* the *Japaneſe* uſed to call *Matma*, but how broad the channel is between that and the former iſland *Kunatir* is not mentioned in Mr. *Muller*'s account; but one may judge that it is not very wide, eſpecially to the weſt, for reaſons to be given hereafter. The iſland *Matma* is larger than any of the reſt, and next to it in ſize is the *Kunatir*.

The natives of the *Eturpu* and the *Urupe* iſlands call themſelves 101 *Keek-Kuriles*. They have a particular language of their own, and reſemble the natives of the iſland *Kunatir*, but we do not know whether their language is the ſame or not; neither are we aſſured whether the language of the *Keek-Kuriles* has any affinity with that of the *Kuriles* of *Kamtſchatka* and the iſlands near it. This is to be obſerved that the *Japaneſe* ſay they call the natives of the laſt four iſlands by the common name of *Jeſo*; from which we may conclude that the inhabitants of *Matma* are of the ſame race with the natives of the former iſlands, and the language is the ſame 000 on all theſe four iſlands. Thus we may correct the errors of former geographers, who give the name of *Jeſo* to a large country lying north-eaſt of *Japan*, which now we find is made up of the above-mentioned iſlands. In this there is nothing contrary to the accounts that we meet with in the voyages of the *Europeans*, particularly of the *Dutch*, who in the year 1643 were ſent to diſcover the land of *Jeſo*. Some of the inhabitants of the iſlands of *Eturpu* and *Urupe* (which had a commerce with the natives of the iſlands near *Kamtſchatka*, about 25 or 30 years ago) were taken captives on the iſland *Paromuſir*, and were brought to *Kamtſchatka*; and this probably put an end to their communication and traffick by ſea. However theſe captives were uſeful; for the accounts received from the *Japaneſe* were explained

000 plained and corrected by them, and ſome new information obtained. According to them thoſe *Keek-Kuriles* on the iſlands *Eturpu* and *Urupe* are under no foreign ſubjection; but *Matma*, both by the account of *European* travellers and of the *Japaneſe*, has been
101 for many years ſubject to *Japan*. They ſay alſo, that upon theſe iſlands are a great number of the *Kuriles* and *Kamtſchadales* in
000 ſlavery, who had been formerly carried off. It is worthy of obſervation throughout all theſe iſlands, that ſuch as lie more weſternly have no wood, but thoſe that lie to the eaſtward have it in abundance, and conſequently there is great plenty of game. There is ſafe anchoring in the mouths of the rivers for large ſhips, in the iſland *Eturpu* particularly. The *Japan* ſilk, cotton ſtuffs, and all ſorts of iron houſhold furniture alſo, are brought to the iſlands *Eturpu* and *Urupe* by the natives of *Kunatir*, who purchaſe them from the inhabitants of *Matma*.

The inhabitants of *Eturpu* and *Urupe* make ſtuffs of nettles, which they ſell to the *Japaneſe*: they likewiſe ſell to them all ſorts of furrs, which they have among themſelves, and which are brought to them from the iſlands near *Kamtſchatka*; alſo dry fiſh and whale's fat, which is uſed in victuals by the natives of the iſland *Matma*. By the accounts of travellers, theſe things are carried even into *Japan*.

The iſland *Matma* lies from the ſouth-weſt to the north-eaſt. The *Japaneſe* have a ſtrong guard upon its ſouth-weſt point, perhaps with a view to defend the country from the *Chineſe* and *Koreans*. Not far from thence, upon the ſhore of the channel, which divides the iſland *Matma* from *Japan*, ſtands a *Japaneſe* city of the ſame name with the iſland, where are kept all ſorts of ammunition, muſkets, and guns for defence, and in which where lately built new fortifications. Moſt of the *Japaneſe* ſettlements upon *Matma* were made by people baniſhed thither. The *Japaneſe*, who were brought to *Kamptſchatka*, give us the ſame accounts of the channel between *Matma* and *Japan*, which we find in the *European* voyages; namely, that this channel is very narrow in ſeveral places, and very dangerous, on account of ſeveral rocky capes projecting into it from both ſides. At ebb and flow the ſea is ſo rapid that if the leaſt time is loſt the veſſels will be either daſhed againſt the capes, or carried into the ſea. The Dutch relate that they have found a ſmall iſland eaſtward of theſe, which they named the States' Iſland; and farther towards the eaſt, they ſaw a great land, which they named the Company's Land, and imagined it to be part of the continent of *North-America.* We can give no ſatisfactory information of theſe things from any accounts received from the *Japaneſe*, but the Company's Land ſeems to be the ſame with the land diſcovered by *De Gama*, and it ought to be conſidered rather as an iſland than the main land; becauſe *America*, by all the obſervations made between *Japan* and *New Spain*, cannot extend ſo far to the weſt. In theſe accounts collected by profeſſor *Muller*, we have only to correct the general ſituation of the *Kurilſki* iſlands, which do not extend to the ſouth, as he was informed, but lie in a row to the ſouth-weſt, as I have ſhewn above, and as they are laid down in the General *Ruſſian* Map: for it is well known by the new maps, and from the verbal accounts of the *Japaneſe*, who have been there, that the channel *Teſſoy*, which reaches along the *Chineſe* coaſt, S. S. W. is only 15 verſts broad; but, according to his account of the ſituation of the iſlands, it ought to be conſiderably wider to the ſouth. In ſhort, if captain *Spanberg*'s deſcription of the *Kurilſki* iſlands to *Japan* could be reconciled with Mr. *Muller's*, then the exact ſituation of each of them would be known, and their diſtances from each other aſcertained; of which we can only now judge by conjecture.

Mr. *Spanberg* gives only two of the iſlands which conſtitute *Jeſo* their proper names; namely, *Matma* and *Kunatir*; but he diſtinguiſhes the iſlands *Eturpu* and *Urupe* by the names of the *Green* and the *Orange* iſlands: and as thoſe iſlands, except *Matma*, are deſcribed, and both their ſize and ſituation laid down, there ſeems to be no doubt but that the cape *Teſſoy* is the north-weſt point of the iſland *Matma*, which was obſerved by the *Ruſſians* only from the eaſt ſide of *Japan*; and though in the above accounts of Mr. *Muller*, it, being ſaid to lie from ſouth-weſt to north-eaſt, may occaſion ſome doubt, yet we may reconcile it in this manner; that the neareſt point of *Matma* to *Japan* extends towards *China* from the S. E. to the N. W. and to the *Kurilſki* ſide from the S. W. to the N. E. as it is expreſſed in the *Chineſe* maps, in which are only wanting the diviſions between the iſlands of *Jeſo*. The channel between *Japan* and the iſland *Matma*, according to the new maps, in ſome places is 20 verſts, and in others much leſs. The north part of the iſland *Japan*, or *Niphon*, is a little above the 40th degree of latitude.

The accounts of the great plenty of wood on the iſlands neareſt to *Japan* are confirmed by Mr. *Steller*, who ſays, that, in general, the iſlands lying fartheſt to the weſt from *America* are the moſt fruitful, and abound with trees of various kinds, among which are lemons, bamboe, *Spaniſh* canes or reeds, and poiſonous herbs, whoſe roots are as yellow as ſaffron and as thick as rhubarb, and are well known to the inhabitants of the firſt *Kurilſkoy* iſland, for they formerly bought them from the natives of thoſe iſlands, and uſed to poiſon their arrows with the juice. Vines alſo grow there; and I have taſted ſome grapes which Lieutenant *Walton* brought from thoſe iſlands in his return from *Japan*. Upon the iſland *Kunatir*, there are great numbers of pine, larch, and fir trees, but a ſcarcity of good water. Wild animals they have in abundance, particularly bears, whoſe ſkins the inhabitants uſe for their cloaths. The natives of this iſland, by his account alſo, wear long ſilk cloaths like the *Chineſe*, have long beards, pay no regard to cleanlineſs, and feed on fiſh and whale's fat. Their bedding is of wild goats' ſkins, of which

there are plenty. They acknowledge no ſovereign, though they 000
live near *Japan*. The *Japaneſe* come to them every year in their ſmall craft, and bring all ſorts of iron ware, brazen pots, wooden lackered waiters and bowls, leaf of tobacco, and ſilk-and-cotton ſtuffs, which they exchange with them for whales' fat and the ſkins of foxes; but they are not ſo good as thoſe of *Kamtſchatka*. The natives of the iſland of *Kunatir* told the *Ruſſians* to beware of thoſe of the iſland of *Matma*, becauſe they had cannon, aſking our people at the ſame time, whether they came from the North, and if they were thoſe who are famous for their armies, and able to wage war with, and conquer, every nation. The language of the iſland *Kunatir* is almoſt the ſame with that ſpoken in the iſland *Paromuſir*: from hence we may conclude, that the natives of *Eturpu* and *Urupe* differ little in their language from the *Kurilſki*.
The inhabitants of theſe iſlands are ſaid to call themſelves /01
Keek-Kuriles; but the word *Kuriles* being corruptly uſed by the *Coſſacks* for the word *Kuſhi*, (which is a common name for the natives of the *Kurilſki* iſlands) it is more probable, that, if the natives of *Eturpu* and *Uturpe* do diſtinguiſh themſelves by the addition of the word *Keek*, they are called *Keek-Kuſhi*, and not *Keek-Kuriles*.

CHAP. IV.

Of AMERICA.

000 THE following accounts of that part of *America* which lies directly eaſt from *Kamtſchatka*, are collected from notes taken out of Mr. *Steller*'s journal.

The main land of *America*, which is now known from 52 to 60 degrees of north latitude, extends from the ſouth-weſt to the north-eaſt ſide, at almoſt an equal diſtance from the coaſt of *Kamtſchatka*; namely, about 37° in longitude: for the coaſt of *Kamtſchatka* alſo lies in the ſame direction, in a ſtrait line from the *Kurilſkaya Lopatka* to the *Tchukotſkoi* Noſs, excluding the gulphs and capes; inſomuch that it may be reaſonably concluded, that theſe lands were once joined, eſpecially at the *Tchukotſkoi* Noſs; for between it and the land, which lies eaſt over againſt it, it is not above two degrees and a half. Mr. *Steller* offers four reaſons to prove the ſame. 1ſt. The appearance of the coaſt which, both of *Kamtſchatka* and *America*, ſeems to be tore off. 2d. Many capes project into the ſea from 30 to 60 verſts. 3d. Many iſlands are in the ſea which divides *Kamtſchatka* from *America*. 4th. The ſituation of the iſlands, and the ſmall breadth of that ſea. But, however, this is left to the judgment of the learned; it is enough for us to relate facts. The ſea that divides *Kamtſchatka* from *America* is full of iſlands, which extend from the ſouth-weſt point of *America* to the channel of *Anianova*, one following another, as the *Kurilſki* iſlands are to *Japan*. The iſlands lie in a row from 51° to 54° of latitude, to the eaſt, and begin a little above 5° from *Kamtſchatka*. Mr. *Steller* thinks, that between the *Kurilſki* and *American* iſlands is to be found the company's land, but ſeveral doubt this; for, according to his opinion, that land ought to be the baſe of the triangle of the *Kurilſki* and the *American* iſlands; this would be probable, if the company's land ſhould be rightly laid down in the maps. 000

America enjoys a much better climate than the coaſt of the north-eaſt ſide of *Aſia*, although equally near the ſea, and every where full of high mountains, which are continually covered with ſnow; but they have greatly the pre-eminence when we compare their qualities with thoſe of *Aſia*. The mountains 137 of *Aſia* being every where rocky and ragged, they loſe their compactneſs and internal native heat; for which reaſon they have no valuable metals, nor any trees or herbs, and in the vallies there grows only ſmall ſhrubby wood and hardy herbs. The *American* mountains are cloſe and their ſurface not covered with moſs, but with a fruitful earth, for which reaſon they are cloathed from the bottom to their tops with a thick and fine wood. The herbs that grow at their feet are of that kind that grow in dry places, but not in marſhes; and the ſame herbs grow in the vallies as on the very tops of the mountains, becauſe there is every where an equal warmth and moiſture. But in *Aſia* it is quite different, for the ſame herb grows twice as high in the plain as in the mountains.

In *America* at 60° the coaſt is covered with wood; but at *Kamtſchatka*, which is only 51° of latitude, the ſmall willows and poplars do not grow nearer the ſea than 20 verſts, and birch wood not nearer than 30, nor the pitch wood along the river *Kamtſchatka* nearer than 50 from its mouth: and in *Kamtſchatka*, in 62°, not one tree is to be found. In Mr. *Steller*'s opinion *America* extends from the before-mentioned latitude to 70° and farther, and is defended and covered from the weſt by the above wood; but on the coaſt of *Kamtſchatka*, eſpecially upon the *Penſchinſka* ſea, it is quite barren, being open to the

violent

137 violent north winds, which blow here frequently; and we find that places lying farther north are more fruitful, as about the *Tchukotſkoi* Noſs, where they are covered from theſe winds.

000 It is likewiſe obſerved, that the fiſh enter the rivers in *America* earlier than in *Kamtſchatka*. Great plenty of fiſh have been ſeen there on the 20th of *July*, at which time in *Kamtſchatka* they only begin to appear. There are a ſort of raſberries of a very extraordinary ſize and fine taſte; beſides honeyſuckles, cranberries, blackberries, and bilberries in great plenty.: as alſo ſeals, ſea-beavers, whales, dog-fiſh, marmotta-minor, red and black foxes which are not ſo wild as in other places, perhaps becauſe they are ſeldom hunted.

Among the known birds have been obſerved magpies, crows, ſea-gulls, water-cranes, ſwans, ducks, quails, plovers, *Greenland* pigeons, and fowls called northern ducks; and among the unknown, ten kinds diſtinguiſhable from any ſpecies of *European* fowl.

171 The natives there,[1] who are as wild as the *Koreki* and the *Tchuketskoi*, are plump, broad ſhouldered, ſtrong boned, of a middle ſize, with ſtreight and black hair which hangs looſe. Their faces are ſwarthy and flat, their noſes ſomewhat pointed but very broad, with black eyes, thick lips, ſmall beards, and ſhort necks. Their ſhirts, which come lower than the knee, are girded about their bellies with leather ſtrings; and their breeches and trowſers are made of the ſkins of ſeals dyed with alder, and are like thoſe of the *Kamtſchatdales*. To their girdles they hang iron knives in caſes, like thoſe worn by the *Ruſſian* boors. Their hats are made of graſs, as thoſe of the *Kamtſchatdales*, without tops, in the ſhapes of umbrellos, dyed with green and red colours, with falcons' feathers before, or with graſs that is combed out, which looks like the plumage that the *Americans* uſe about *Brazil*. They feed on fiſh, ſea animals, and the ſweet herb, which they

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[1] [in America across from Kanchatka].

prepare as the *Kamtſchatdales* do; beſides they uſe the dry bark of the poplar and pine trees, which is eaten as food, not only here and in *Kamtſchatka*, but in all *Siberia*, and ſome parts of *Ruſſia*, even as far as the province of *Viatka*, eſpecially in times of ſcarcity; they uſe likewiſe ſea-graſs laid up in heaps, which looks like, and is as tough as, leather thongs. Wine and tobacco they know not, which ſerves as a real proof of their having had hitherto no communication with the *Europeans*. They eſteem it a particular ornament to make holes on their faces in different parts, in which they place various ſtones and bones; others wear in their noſtrils feathers about two inches long; ſome wear bones of the ſame ſort in their under lips, and others upon the forehead. The people who live on the iſlands near the *Tchukotſkoi* Noſs, and who have a communication with the *Tſchuktſchi*, are certainly of the ſame race, for among them it is always eſteemed as an ornament to wear bones. The late major *Paulutſkoy* having had once a ſkirmiſh with the *Tſchuktſchi*, found among the dead two men of this country, under whoſe noſes were placed two teeth of the ſea-horſe, in holes made for that purpoſe; for which reaſon the natives call thoſe iſlanders *Zoobatee*, or large teethed; and, as the priſoners reported, they did not come there to aſſiſt them, but to ſee their manner of fighting with the *Ruſſians*.

It may be concluded from this, that the *Tſchuktſchi* and they have the ſame language, or, at leaſt, that there is ſuch a near reſemblance between their languages, as to enable them to converſe together without an interpreter. The language of the *Tſchuktſchi* is derived from that of the *Koreki*, and differ from it in dialect only; the *Koreki* therefore can converſe with them without difficulty. And Mr. *Steller*'s ſaying, that not one of our interpreters could underſtand the *American* language, might ariſe from the great difference in the dialect, or from the particular pronunciation, which is obſerved, not only between the

wild

/7/ wild natives of *Kamtſchatka*, but alſo between the *Europeans* in different provinces. There is ſcarce one fort in *Kamtſchatka* which does not differ in language from that of another; and thoſe forts of ſome hundred verſts' diſtance hardly underſtand one another. The *Americans* and the *Kamtſchadales* agree in the following things: Firſt, their features are alike. Secondly, the *Americans* prepare the ſweet herb in the ſame manner as the *Kamtſchadales* do, which has never been obſerved any where elſe. Thirdly, they both uſe wood in ſtriking fire. Fourthly, it has been obſerved, from many inſtances, that their hatchets are made of ſtone or bone; and Mr. *Steller* thinks, not without reaſon, that the *Americans* had formerly a communication with the people of *Kamtſchatka*. Fifthly, their wearing apparel and hats are the ſame. And, ſixthly, they dye the ſkins of beaſts with alder, as the *Kamtſchatdales* do: from whence it appears probable, that they are of the ſame race. Theſe particulars may help to anſwer the queſtion, Whence was *America* peopled? for though we ſhould grant, that *America* and *Aſia* were never joined, yet theſe two parts of the globe lie ſo near each other, that the impoſſibility of the inhabitants of *Aſia* going over to *America*, (eſpecially as the number of iſlands lying between them made the paſſage more eaſy) cannot be maintained.

Their arms are the bow and arrow; but what ſort of bows we cannot tell, for our people ſaw none of them. Their arrows indeed are longer than thoſe of the *Kamtſchadales*, but reſemble intirely thoſe uſed by the *Tunguſki* and *Tartars*, which our people found were dyed of a black colour, and ſcraped ſmooth. The *Americans* uſe boats made of ſkins, as the *Koreki* and the *Tſchuktſchi* do. Their boats are 12 feet long and two broad, the head and ſtern ſharp, and the bottom flat. The inſide is made of poles joined at both ends, which are kept extended by a proper piece of wood; and the ſkins ſewed round ſeem to be thoſe of ſeals dyed of a cherry colour: the ſeat is round, two yards from the ſtern, and ſewed about with guts, which, 171 with the help of leather thongs laced round the edges, can be drawn together and opened like a purſe. The *American* ſitting in this place ſtretches out his legs, and draws the ſkin tight about his body. Theſe boats will live in the moſt ſtormy ſea, though they are ſo light that they may be carried with one hand.

When the *Americans* ſee any ſtrangers they row towards them, making a long ſpeech; but whether this be ſome conjuration, or a ceremony at receiving them, we cannot certainly ſay; for both the one and the other is in uſe among the *Kuriles:* but, before they approach them, they paint their cheeks with a black pencil, and ſtop their noſtrils with graſs. They ſeem to receive ſtrangers very kindly, converſe in a friendly manner, with their eyes fixed upon them, treat them with great civility, and make them preſents of whales' fat, and of thoſe pencils with which they daub their own cheeks, not doubting but ſuch things are as acceptable to others as to themſelves.

It is very ſafe ſailing in thoſe parts in the ſpring and ſummer; 000 but in the autumn ſo dangerous, that there is not a day on which they dare venture out for fear of periſhing; the winds and ſtorms being ſo violent, that the *Ruſſians*, who have uſed the ſea for forty years, declare they have never ſeen any thing equal to them. The following are looked upon here as ſigns of the land being near: When many different ſorts of ſea-cabbage appear floating on the ſea; when they obſerve that ſort of graſs of which cloaks, carpets, and little bags are made at *Kamtſchatka*, for it grows only upon the ſea ſhore; and when ſea-gulls and ſea animals, ſuch as ſeals and the like, appear in great numbers; for though, the ſeals have an opening in their hearts, called the *Foramen ovale*, and a paſſage called *Ductus arterioſus botalli*, which are both open, and therefore can keep under water for a long time, and may go far from the ſhore without danger, as they can find proper food at a great depth; yet, notwithſtanding all this, they ſeldom go out above ten miles to ſea. But the moſt certain ſign of the land being near, is, when they ſee *Kamtſchatkoi* beavers, which feed only upon lobſters and crabs, and, by the formation of their hearts, cannot continue under water above two minutes.

We muſt yet mention ſome iſlands, which lie near to *Kamtſchatka*, though not in a ſtrait line with thoſe above-deſcribed, but north of them, particularly *Bering's* iſland, which is now ſo well known to the *Kamtſchatkoi* inhabitants, that many go thither for the trade of ſea beavers and other animals. This iſland extends between 55° and 60° of latitude from the ſouth-eaſt to the north-weſt. Its north-eaſt end, which lies almoſt directly oppoſite to the mouth of the river *Kamtſchatka*, is about two degrees from the eaſtern ſhore of *Kamtſchatka*, and its ſouth-eaſt point is about three degrees from the *Kronotſkoy* Noſs. The length of this iſland is 165 verſts, but its breadth is unequal, being from the ſouth-eaſt point to the ſteep and unpaſſable cliff, which lies fourteen verſts from the point, between three and four verſts in breadth; from this to the *Seepucha* bay about five verſts; from the *Seepucha* bay to the *Beaver* cliff, ſix verſts; and thence to the ſmall river *Kitova*, five verſts. Farther on it grows broader and broader; and its greateſt breadth is oppoſite to the northern cape, where it is twenty-three verſts. One may ſay in general, that there is ſo little proportion between the length and breadth of this iſland, that our author doubts whether its equal is to be found in any other part of the world; at leaſt, he has neither read nor heard of ſuch; and he ſays alſo, that the iſlands which he ſaw near *America*, and the whole range of them towards the eaſt, have nearly ſuch proportions.

This iſland conſiſts of one rocky ridge divided by many vallies 000 lying north and ſouth; and the mountains are ſo high that, in fair weather, they may be perceived almoſt in the middle of the paſſage between the iſland and *Kamtſchatka*.

The natives of *Kamtſchatka* were of opinion for many years, 823 that over-againſt the mouth of the *Kamtſchatka* there ought to be land; becauſe there was always the appearance of a fog or miſt there, let the horizon be ever ſo bright. The higheſt mountains 000 here are not higher than two verſts perpendicular; the tops are covered for the thickneſs of half a foot with a common yellow clay; but below are hard yellow rocks. The *Stanovoy* ridge is hard and entire; and the mountains upon the ſides are ſeparated by vallies, through which run ſmall rivers on both ſides of the iſland. It is obſervable in this iſland, that the mouths of all the rivers lie either to the ſouth or to the north, and from their ſprings they either run ſouth-eaſt or north-weſt.

There are no plains near the principal ridge, except the ſea-ſhore, and even there are little mountains of half a verſt, or a verſt, in circumference. Such hills are obſerved near every rivulet, with this difference, that the flatter the capes are towards the ſea, the larger are the plains behind. The very ſame thing is alſo obſerved in the vallies: if they lie between high mountains, they are leſs, and the rivulets in them alſo ſmaller; but in thoſe vallies which are between low mountains, it is otherwiſe. On the *Stanovoy* or principal ridge, wherever the mountains are ſteep and full of cliffs, there are always found lakes half a verſt, or a verſt, from the ſea-ſhore, which run by ſmall outlets into the ſea.

The mountains conſiſt of one hard blue ſtone; but where they are parallel with the ſea, there the capes are made up of a ſtrong greyiſh clean ſtone, fit for poliſhing. This circumſtance the author eſteems worthy of obſervation, becauſe he imagines the ſtone might obtain this change from the ſea-water.

In many places of the iſland the beach is ſo narrow, that it is hardly poſſible to paſs it at high water; and in two places there is no paſſage at all: one of theſe is near the ſouth-eaſt, and the other near the north-weſt point of the iſland.

It is remarkable, that wherever there is a bay on one ſide of the iſland, on the other, directly oppoſite to it, is a cape; and where the ſhore on one ſide is flat and ſandy, on the other it is rocky and torn. Where the turning is ſharp, either to one ſide or the other, there the ſhore is cliffy and ſtony about a verſt or two from the turning. The mountains nearer the *Stanovoy* ridge are rather the ſteepeſt. There are many cracks which were occaſioned at different times by earthquakes; and it has been obſerved, that in the higheſt mountains ſomething ſticks out like kernels, ending as cones; which, though they ſeem to be of the ſame ſubſtance with the mountain itſelf, yet are ſomewhat ſofter and clearer, and have a particular figure. Such kernels are found on the mountains of *Baykal*, and on the iſland *Olchon*. Mr. *Steller* received from *Anadirſk* ſtones of a green colour ſomewhat reſembling theſe kernels, and was informed that they were taken from the top of the mountains; and that whenever they are broken off, others grow in their places. It is thought that theſe ſtones are formed by ſome internal motion of the earth, particularly by its preſſure towards the center; from whence theſe kernels may be reckoned a ſpecies of chryſtal, or the pureſt ſtony matter, which is firſt preſſed from the center in a liquid ſtate, and afterwards hardened by the external air.

On the north-eaſt ſide of the above-mentioned iſland is no haven, even for the ſmalleſt veſſel, except one place which is in breadth 80 fathoms, where a veſſel may anchor in calm weather. There are ſhoals that lie off as far as four or five verſts from the ſhore, which are laid with ſtones as if done by deſign, and on which you may walk at low water to the deep places without wetting your feet.

North

000

North of the haven is a large bay, in which are ſuch ſtones and pillars as are found on the ſhore. The ſouth-weſt ſide of the iſland is quite different; for though the ſhore is rocky and more torn, yet in two places there is a paſſage for flat-bottomed boats, not only to that, but even into the lakes. The firſt place is 50, and the ſecond is 115, verſts from the ſouth-eaſt point of the iſland. This laſt is eaſily known from the ſea, for the land turns there from north to weſt; and in the very cape runs a river, which, though ſmall, is the largeſt in that iſland, and the depth of it at high water is ſeven feet. It runs out of a great lake, which is a verſt and a half from its mouth; and as the river is deeper when they have paſſed the bar, the ſailing to the lake in ſmall veſſels is very eaſy and ſafe. The principal mark by which they can know this river is an iſland ſeven verſts round, and it lies ſeven verſts ſouth from the mouth of it. The ſhore from thence to the weſt, for five verſts, is ſandy and low, and there are no rocks. From the high mountains of this iſland are to be ſeen the following places: in the ſouth, two iſlands; one of them in circumference ſeven verſts, as was ſaid before; and the other is in the ſouth-weſt, oppoſite to the very point of *Bering*'s iſland, and at the diſtance of 14 verſts. It conſiſts of two high and ſplit rocks, about three verſts in circumference. From the very north-weſt point of *Bering*'s iſland, in clear weather, are ſeen mountains covered with ſnow; and the diſtance of them from thence may be reckoned about 100 or 140 verſts. Theſe mountains were taken by the author for a cape of the main-land of *America*, for the following reaſons: firſt, becauſe the mountains, as he judged by their diſtance, were higher than thoſe of the iſland: ſecondly, becauſe within the ſame diſtance on the eaſt from the iſland there were plainly obſerved ſuch other white mountains; from the height and direction of which, all were of opinion that

000 it was the main land of *America*. From the ſouth-eaſt point of *Bering*'s iſland they ſaw lying ſouth-eaſt ſome other iſlands, but not ſo plainly; and their ſituation was thought to be between *Bering*'s iſland and the continent. It has been obſerved, that above the mouth of the river *Kamtſchatka*, towards the weſt and ſouth-weſt, in clear weather, there is always a fog; and from that, in ſome meaſure, it was known that *Bering*'s iſland was not far from the country of *Kamtſchatka*. To the north part of *Bering*'s iſland there is another, in length from 80 to 100 verſts. The channel betwixt theſe iſlands, towards the north-weſt, is about 20 verſts, and towards the ſouth-eaſt, about forty. Near the points of both are many rocks and pillars in the ſea.

The weather differs from that of *Kamtſchatka* only in being more ſevere and ſharp; for the iſland has no cover from any point, and is narrow and without wood. The wind is ſo ſtrong in the low and narrow vallies that a man can hardly keep his feet, and it was obſerved to be higheſt in the months of *February* and *April*, when it blowed from the ſouth-eaſt and the north-weſt; when from the former, the weather was clear and tolerable, and, when from the latter, it continued clear, but was very cold. The higheſt tides were in the beginning of *February*, when the wind was north-weſt; and in the middle of *May*, from the great rains and the melting of the ſnow, another flood happened; yet both theſe floods were moderate, compared to thoſe which, undoubtedly, have been formerly in thoſe iſlands; for thirty fathoms higher than the ſea-mark, lie wood and whole ſkeletons of ſea animals, which have been left by the ſea; and it is probable that in the year 1737, the flood was as great here as at *Kamtſchatka*. Earthquakes happen frequently. The greateſt here, which laſted exactly ſix minutes, was felt in the beginning of *February*, when the wind was weſternly; a great noiſe, which preceded the ſhock, was heard under ground, attended with a whiſtling wind, which went from ſouth to north. 000

The water here is remarkable for its lightneſs and purity; and its medicinal virtues have been experienced by the ſick. Every valley has its rivulet, and the number of them all is above ſixty. By reaſon of the great declivity of the vallies they are very rapid; and, near the ſea, divide themſelves into many ſtreams.

THE NATURAL HISTORY OF

KAMTSCHATKA.

PART II.

CHAP. I.

137

Of the SOIL.

UPON the banks of the river *Kamtſchatka* is found plenty of roots and berries, which in ſome meaſure ſupply the want of corn. There is alſo wood ſufficient not only for building houſes, but even for ſhip-building; 134 and Mr. *Steller* is of opinion, that near the head of this river, 241 both ſummer and winter corn would grow as well as in any other places in the ſame latitude, the ſoil being deep and rich; and though ſnow falls in very great quantities, yet it thaws early enough, and the ſpring is not ſo rainy, nor have they ſuch damps, there as in many other places. Several tryals of ſummer-corn have been actually made both in the upper and lower *Oſtrog* * of *Kamtſchatka*; in which both barley and oats have ſucceeded. At the monaſtery of our Lord of *Jakutſki*, they have

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* *Oſtrog* is a little town fortified with palliſades, where the *Ruſſian* Coſſacks, and other inhabitants live.

134 ſeveral years paſt ſown ſeven or eight poods † of barley, which
241 yielded a crop not only ſufficient for groats and meal for their own uſe, but even enough to ſupply their neighbours, though they are obliged to plough their land with men.

All garden ſtuff thrives not alike; the moſt ſucculent produce only leaves and ſtalks. Cabbage and lettice never grow to any head, and the peas continue in flower until late in the harveſt without yielding ſo much as pods; but garden roots which are full of juice, ſuch as turnips and radiſhes, grow very well. Theſe tryals, however, were only made upon the banks of the Great River and *Awatſcha*. Such things as require a hot ſoil, grow very well every where, but ſtill beſt upon the *Kamtſchatka*. Upon the Great River I never ſaw any turnips larger than three or four inches diameter; but upon the *Kamtſchatka*, I have ſeen them four or five times as big.

137 The graſs grows here ſo high, and is ſo full of ſap that one ſcarcely ſees any thing like it in all the empire of *Ruſſia*; near the river and lakes, and in the opening of the woods, it riſes to above the height of a man, and ſo faſt that it may ſometimes be mowed thrice in a ſummer; ſo that few places can be more proper for breeding of cattle; and although the blades are thick and high, and make but a coarſe ſort of hay, yet the cattle are large and fat, and give plenty of milk both ſummer and winter, which I attributed to the richneſs of the ſoil and the ſpring rains. The graſs continues full of juice, even to the beginning of winter, which being condenſed by the cold prevents the graſs from turning hard during that ſeaſon. As the graſs is ſo high and thick, a great deal of hay may be made upon a ſmall ſpot; and the cattle can find food in the fields all the winter. The places where
132 the graſs thus grows are never ſo much covered with ſnow as the bogs and ſwamps, and for this reaſon it is difficult to travel over them in the winter.

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† A pood is a *Ruſſian* weight of 40 lb.

In other places lying upon the Eaſtern Ocean, either to the 134
N. or S. of *Kamtſchatka*, there is no land fit for culture; for
all that is near the ſhore is either ſandy, ſtony, or boggy, and
the banks are ſo narrow, that if the ground was good, yet there
is not enough for agriculture; and there are but very little hopes
of the land about the *Penſchinſka* ſea anſwering better, eſpecially
for winter-corn, it being all marſhy and boggy. At ſome diſtance
from the ſea are found woody places which are dry and
high, and appear not improper for corn; but the ſnow which 132
falls in the beginning of the harveſt before the earth is frozen,
and lies generally deep upon theſe places 'till the middle of *May*,
both prevents the ſowing of the ſummer-corn, and deſtroys the
winter-corn; and, becauſe at the thawing of the earth the corn
would be blaſted by the evening froſts, it is impoſſible to ſow any
before the middle of *June*; after which time to *Auguſt* are continual
rains, ſo that ſometimes the ſun is not ſeen for fourteen days
together: this would cauſe the corn to grow very high and full
of juice; but, for want of warm and dry weather, it would never
ripen. Notwithſtanding, Mr. *Steller* thinks, that if the ground 134
was properly prepared, oats and barley might ripen there; but
this is much to be doubted, until, at leaſt, further tryal can be
made; for I have myſelf ſeveral times ſown barley upon the
Great River, and it grew well in thickneſs, height, and ſtrength
of blade 'till the beginning of *Auguſt*, when, juſt as the ear
was putting forth, all of it was deſtroyed by the froſt.

All theſe barren places, not only near the *Penſchinſka* ſea, but even within the land, appear to be compoſed of earth brought from other parts. This one may diſcover by the different ſtrata, and perceive how they have encreaſed yearly on the banks of the rivers, which are high, and on the cliffs that are bare. I have ſeen hanging out of the earth, trees which are not to be found in that country, more than ſeven feet deep under the ſurface. Hence it may be concluded, that all theſe barren, boggy places, where at

134 preſent are no woods, but only ſhrubs, and ſtunted ſallows, and birches, were formerly covered with water, which has decreaſed by degrees here, as it has upon the north-eaſtern coaſt. Below the earth lies a bed of pure ice, extremely hard; and under that a ſoft wateriſh clay, with gravel; this continues from the ſea up to the very mountains, and will ſufficiently account for the barrenneſs of theſe parts. But, though the land is not every where fit for agriculture, yet ſome places upon the river *Kamtſchatka* (which have been already mentioned) and along the *Biſtroy* river, are ſufficient to furniſh with corn, not only the inhabitants, but alſo the neighbouring parts. It is however to be feared, that the burning of the woods, in order to clear the lands, may drive away the ſables, who have a particular averſion to ſmoke: this happened upon the river *Lena*, formerly the beſt hunting country, but now deſerted by theſe animals.
137 The ſcarcity of wood is a great inconvenience, both the *Ruſſians*
313 and natives being obliged to fetch it twenty or thirty verſts with
459 great trouble and loſs of time, for the neceſſary uſes of boiling
their ſalt and curing their fiſh: and it is very difficult to bring it down in floats, becauſe the current is rapid and ſo ſhallow, that they can bring only two little bundles on each ſide of a ſmall fiſhing-boat; otherwiſe they would obſtruct themſelves in the management of their boat, and thereby run the riſk of being driven upon the rocks, ſand-banks, and trunks of trees, where not only their boat and wood, but frequently the people themſelves are loſt. Sometimes the ſcarcity of wood is ſupplied by ſuch as is thrown up by the ſea, which the inhabitants gather upon the ſhore; but this wood that has been ſoaked in the water, although they are at great pains to dry it, never burns clear, but ſmothers away with a continual ſmoke very hurtful to the eyes.

137 At the diſtance of 30 or 40 verſts from the ſea, and near the
313 heads of the rivers, grow birch-trees, alder, and poplar; of
which the people build their houſes and make their boats. But this

this they bring down with great difficulty, uſing the method 137
above mentioned: for which reaſon a very poor houſe will coſt 313
here 100 rubles and more, and a ſmall fiſhing-boat five rubles. In other places, where the hills are nearer the ſhore, and the water-carriage eaſier, wood for firing and building is much cheaper.

Upon the *Biſtroy* river, which falls into the Great River below 137
the *Bolſcheretſkoi Oſtrog*, grows the beſt wood that is in theſe parts; even the birch-trees are ſo large, that captain *Spanberg* built a ſloop with their wood, in which he made ſeveral diſtant voyages to ſea.

It is very remarkable, that when this veſſel was launched ſhe lay as deep in the water as a veſſel full loaded; and it was believed, that ſhe never would be fit to go to ſea, but that the ſmalleſt loading would ſink her. But, when ſhe was laden, ſhe drew very little more water, and few veſſels ſailed better or lighter, or could go nearer the wind: the reaſon of which may be, that as this wood has not ſo much roſin, it ſucked a greater quantity of water at firſt, but ſo ſoon as its parts were once filled, it then ſucked very little more.

There is great plenty of wood upon the eaſtern coaſt of *Kamtſchatka*; from the hills down to the very ſhore grow very fine birch and alder trees. Beyond the river *Jonpanoba*, and towards its head, begin the woods which continue to the *Kamtſchatka*, *Lopatka*, and along the river *Kamtſchatka* to the mouth of the river *Elouki*. Up the river, almoſt to its head, grow likewiſe pines, but not large enough for buildings. About the neck of land which joins the peninſula of *Kamtſchatka* to the continent, the wood begins again to fail.

The changes of the weather and air are commonly in the fol- 132
lowing order: harveſt and winter make up more than one half of the year; and the ſpring and ſummer cannot be reckoned

above four months: the trees commonly begin to bud about the end of *June*, and ſome of them to loſe their leaves in the month of *Auguſt*.

The winter is moderate and conſtant, ſo that there are neither ſuch ſevere froſts nor ſudden thaws as in *Jakutſki*. The mercury in *de l' Iſle*'s thermometer was between 160 and 180 degrees. From the ſevere froſts that we had two years following in the month of *January*, it fell to 205 degrees. The month of *January* is always their coldeſt month; and at that time the mercury was between 171 and 200 degrees.

The ſpring weather is pleaſanter than the ſummer; when, although it ſometimes rains, yet now and then there are fine clear days. The ſnow lies to the end of *May*, which with us is reckoned the laſt ſpring month.

The ſummer is for the moſt part very diſagreeable weather, rainy and cold *; the reaſon of which is the continual damps from the neighbouring mountains being covered with ſnow that never melts. It frequently happens, that for a week or two the ſun does not appear: and during all the time that I was there we had never one whole week of fair weather, never one day ſo clear but the mornings were foggy; and there fell, as it were, a ſmall drizzling rain, which continued 'till twelve o'clock. From this moiſt air and the neighbouring hills it is ſo cold, that one can never be without warm cloathing.

I never obſerved either violent rains or loud thunder; for the rains are ſmall, and the thunder reſembles ſome rumbling noiſe under the earth. The lightning is alſo very weak.

In the *Oſtrog* upon the Great River, where the air is warmer, the mercury in the thermometer changed from 130 to 146 degrees; and by an extraordinary heat, that happened two different years in the month of *July*, it roſe 118 degrees.

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* This is to be underſtood of the country about the Great River and the *Penſchinſka* ſea; in other places the ſummer is tolerable, as will be mentioned hereafter.

The inconſtancy of the ſummer weather not only occaſions the unfruitfulneſs of the land, but is likewiſe a great hindrance to the people in preparing their fiſh againſt the winter; ſo that, although there is vaſt plenty of fiſh, they are not able to prepare ſo much as to prevent a ſcarcity before the winter is over; nor can they preſerve one fiſh out of ten which they hang up to dry, the continual wet breeding worms which conſume it; ſo that the fiſh which the dogs and bears catch themſelves and lay up, ſells very dear in the ſpring. 132 251

In the more diſtant places from the ſea, and eſpecially about the upper *Kamtſchatka Oſtrog*, the weather is very different; it being fine and clear from the month of *April* to the middle of *June*. The rains begin after the ſummer ſolſtice, and continue to the end of *Auguſt*. Deep ſnows fall in the winter; but high winds ſeldom happen, and, when they do, are but of ſhort continuance: and although there does not, perhaps, fall more ſnow than upon the Great River, yet it is deeper, as it lies lighter. 132

The harveſt weather is generally agreeable and clear, except at the end of *September*, when ſtorms frequently happen. The rivers are generally frozen over in the beginning of *November*; for their ſwift current prevents their freezing in moderate froſts. Upon the *Penſchinſka* ſea the winds are generally in the ſpring ſouth-ſouth-eaſt and ſouth-weſt; in the ſummer, weſt; in the autumn, north and north-eaſt; in the winter before the ſolſtice, uncertain; but after that, to the month of *March*, the north-eaſt and eaſt winds prevail. From theſe winds the ſpring and ſummer, before the ſolſtice, are generally thick and heavy; but the weather in the months of *September*, *October*, *February*, and *March*, is more agreeable, and is the time for trade and long journies. In *November*, *December*, and *January*, there is little clear good weather, but heavy ſnows and great drifts, which in *Siberia* they call *Pourgami*. The eaſt and ſouth-eaſt winds blow long and moſt violently, ſometimes for two days together, and with ſuch vehemence,

132 that a man cannot ſtand upon his feet. Theſe winds, which
136 generally rage the three laſt-mentioned months, bring a great
quantity of ice upon the ſhore of the *Lopatka* and *Awachinſkaya*
bay, with a multitude of ſea-beavers: about this time, therefore,
132 is their beſt ſeaſon for catching theſe animals. The north winds, either in ſummer or winter, bring agreeable clear weather; but the ſouth and ſouth-weſt winds in ſummer are attended with rain, and in winter with ſnow. And although the cold is not ſo great, yet the air is always heavy and thick, and at ſea generally attended with great fogs, as our people, who went upon the *American* and *Japan* expedition, experienced: therefore ſailing in ſuch weather is as dangerous as living upon the land is diſagreeable; and this agreement of the weather of *Kamtſchatka* with what is found far out at ſea is to be attributed not only to neighbouring countries, but likewiſe to the great and extenſive Southern Ocean. Hence the northern parts of *Kamtſchatka*, that are ſheltered from the ſouth wind, are both more fertile and enjoy a better climate; and the nearer one comes to the *Lopatka* the moiſter and thicker is the air in ſummer, and the winds more violent and of longer duration in winter. It frequently happens, that about the Great River the weather is very calm and agreeable, while at the *Lopatka* the inhabitants cannot ſtir out of their huts; becauſe it is a narrow point of land, and expoſed to every wind, except in the bay. All along the *Penſchinſka* ſea, the more northernly any place lies, the leſs rain have they in ſummer and wind in winter. The winds and weather about the mouth of the *Kamtſchatka* river, and near to the upper *Oſtrog*, are very changeable. From the eaſt and ſouth-eaſt they have as violent ſtorms as about the *Penſchinſka* ſea; but yet, compared with this, the weather is more frequently fair than rainy. The difference between the eaſtern and weſtern parts of *Kamtſchatka* is plainly to be ſeen in travelling from the head of the *Biſtroy* river: for towards the *Penſchinſka* ſea the air appears always thick and hazy,

hazy, the clouds heavy, and always dark; while *Kamtſchatka* 132
appears like another world, where the land lies higher, and the
air is clear and ſerene.

The ſnow lies always deeper upon the *Lopatka* than upon the 132
northern ſide of *Kamtſchatka*; ſo that, if it be twelve feet in 182
depth about the *Lopatka*, upon the *Awatſcha* and the Great 233
River it is not ſo deep by one third, and at the ſame time lies 105
lighter and more equal, by reaſon that the winds are not ſo
high there. About *Tegbil* and *Karaga* the ſnow is ſeldom deeper than a foot and a half: hence the reaſon appears why the *Kamtſchadales* do not keep rein-deer as well as the *Koreki*, but depend upon the fiſh for their nouriſhment, which upon the north-eaſt and north-weſt coaſt from the Great River is ſo ſcarce, that unleſs theſe barbarous creatures could digeſt every thing they can get down, they would not be able to ſupport life; for, though throughout the country of *Kamtſchatka* there would be food enough for rein-deer, yet the depth of the ſnow renders it impoſſible to maintain a number of them; and what rein-deers we had occaſion for in the expedition were never kept here in the winter, the depth of the ſnow making it hard for them to dig down to their food.

The force of the ſun reflected from the ſnow in the ſpring is 132
ſo great, that the inhabitants are as tawny as *Indians*; nay, they 293
have their eyes ſpoiled and blinded thereby: therefore the natives 732
generally wear covers pierced with ſmall holes, or nets of black 142
hair, to leſſen the number of rays which would otherwiſe fall
upon their eyes. This is occaſioned by the great winds, which drive the ſnow ſo cloſe together that it is almoſt as hard and ſolid as ice, and will not allow the rays of the ſun to penetrate, but reflects them with greater force upon the very delicate and ſenſible
nerves of the retina than they are able to bear. Mr. *Steller* 000
ſays, that neceſſity forced him to find out a remedy for the pain and inflammation of the eyes, which generally gave relief in ſix

000 hours' time. It was the white of an egg, with ſome camphire and ſugar, which he rubbed 'till it foamed upon a pewter plate, then tied it in a handkerchief, and bound it upon the forehead. This he found to ſucceed in every inflammation of the eyes.

132 It hails frequently both in ſummer and harveſt; but I never ſaw the hail bigger than peaſe. It ſeldom lightens but at the ſummer ſolſtice. The thunder is alſo but ſeldom heard, and then ſeems to be at a great diſtance. We have no inſtance of any one killed by thunder: the natives ſay, indeed, that before the arrival of the *Ruſſians* they had a great thunder, and ſome were killed by it; but this is to be queſtioned, ſince for ſo long a time we have had no inſtances of it. As to fogs, it is impoſſible that there ſhould be greater any where than at *Kamtſchatka*; and it is to be queſtioned whether deeper ſnows fall any where between 55 and 52 degrees north latitude than here, from the melting of which the rivers ſwell ſo much as to overflow their banks, and the earth in the ſpring is entirely covered with water. The cold in winter is moſt intenſe about the Great River and the *Awatſcha*; but in the lower *Kamtſchatkoi Oſtrog* it is much warmer than in any other place of *Siberia* in the ſame latitude.

The greateſt inconveniency ariſes from the violent winds and ſtorms, concerning which the following remarks may not be improper. Before a great wind, which generally comes from the eaſt, the air is always thick and dark; but, as I had not a thermometer, I cannot be certain if it is warmer then than at other times. The eaſt winds coming from the *Lopatka*, where are burning mountains and warm ſprings, I imagine that they not only ariſe from the narrowneſs of the land, but alſo from ſubterraneous fires and vapours.

135 With regard to other advantages or diſadvantages of this country,
258 one may ſay in general, that its greateſt riches conſiſt in plenty
439 of good furs and fiſh, and its greateſt inconveniences in the want of iron and ſalt. The firſt they are ſupplied with from

other places, and the ſecond by boiling ſea water into ſalt; but 135
the troubleſome diſtant carriage of the iron, and the boiling of 258
the ſalt, are attended with ſuch expence and difficulty, that they 435
are both ſold at a moſt intolerable price. One cannot buy a 439
common ax under two rubles, and a pound of ſalt coſts four
rubles.

CHAP. II.

Of the VOLCANO's *or* BURNING MOUNTAINS. 133

THERE are three burning mountains in *Kamtſchatka*, the *Awachinſky*, the *Tulbatchinſky*, and the *Kamtſchatka*.

The *Awachinſky* mountain ſtands upon the north ſide of the bay of *Awatſcha*, at a good diſtance indeed, but its bottom reaches to the very bay; and all the high mountains, near one half of their height, are made up, as it were, of rows of hills ſet one upon another, and the top they call the *Shatſe*, or tent, which is always naked, but the lower parts are generally covered with wood.

Theſe mountains for many years throw out a continual ſmoke, but flame only at times. The moſt terrible fire happened, as the *Kamtſchadales* ſay, in the ſummer of the year 1737; but this laſted no longer than 24 hours, and concluded by throwing out a vaſt cloud of aſhes, which covered the adjacent parts the depth of a verſhoke *.

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* A verſhoke is the $\frac{1}{16}$ of the *Ruſſian* arſhin, which contains 27 inches.

/33 After this, in *Awatſcha* and the iſlands near the *Kurilſkaya* 73/ *Lopatka* they felt a terrible earthquake and motion of the waters, which was obſerved in the following manner. The earthquake began about three o'clock in the morning the 6th of *October*, 1737, and continued about a quarter of an hour, and many of the *Kamtſchatkoi* huts and tents were overturned. At the ſame time the ſea was driven upon the ſhore, and roſe about 20 feet; immediately after all the water was carried back to a great diſtance from the ſhore, and then it returned again higher than before, and afterwards retired ſo far that one could not ſee it from the ſhore. At that time, in the paſſage between the firſt and ſecond of the *Kurilſki* iſlands, they obſerved cluſters of rocks in the bottom of the ſea that had never been ſeen before, although they formerly had great earthquakes and extraordinary agitations of the ſea. A quarter of an hour after this the earthquake returned with moſt terrible waves, and the ſea overflowed the ſhore 200 feet high, which, as formerly, immediately retired. This rolling motion continued for a long time, the ſea frequently approaching the ſhore and departing from it. Before every earthquake a great, heavy, rumbling noiſe was heard from this overflowing of the ſea. The inhabitants were all ruined, and many of them miſerably loſt their lives. In ſeveral places the meadows, little hills, and fields, were turned into ſalt-water lakes. This was not ſo violent upon the *Penſchinſka* ſea as upon the Eaſtern Ocean; and the people about the Great River ſuffered very little.

At this time we failed from *Ochotſka* to the mouth of the Great River; and when we came on ſhore the 14th of *October*, the earthquake was ſtill perceptible, which was ſometimes ſo ſtrong that we could not ſtand upon our feet; and this continued to the ſpring of the year 1738: however, it was more upon the *Kurilſkaya Lopatka* and the coaſt of the Eaſtern Ocean than in thoſe places that were more remote from the ſea.

The Coſſacks of the great river, who were then upon the *Kurilſki* iſlands, told me, that upon the beginning of the earthquake they ran with the natives up to the tops of the mountains, and left all their goods, which were deſtroyed, as well as the habitations of the *Kuriles*.

The *Tulbatchinſky* mountain ſtands upon that neck of land which lies between the rivers *Kamtſchatka* and *Tulbatchik*: it has ſmoked for many years. In the beginning of the year 1739, for the firſt time, it threw out a ball of fire which ſet the woods on fire. After this fire-ball aroſe a thick cloud, which increaſing gradually at laſt fell down and covered the ſnow 50 verſts round with aſhes. I was going at this very time from the upper to the lower *Kamtſchatkoi* fort, and was obliged to wait a new fall of ſnow, as we could not travel upon this ſooty matter.

Nothing extraordinary happened upon this conflagration, except ſome ſmall ſhocks of an earthquake, which were felt both before and after. The great ſhock was about the middle of *December*, which I felt when I went to the upper *Kamtſchatkoi* fort from the Great River. We were then not far from the *Hrepta*, or *Ogulminſky* ridge. When we ſtopped about noon, the diſmal ſound in the woods that we heard at firſt ſeemed as an approaching ſtorm; but our kettles being thrown from the fire, and we ourſelves rocked in our ſledges, we were ſoon convinced of our miſtake. This earthquake had only three vibrations, which ſucceeded each other at about a minute's diſtance.

The mountain of *Kamtſchatka* is higher, not only than the two laſt mentioned, but than any other mountain in that part. Two thirds of its height are made up of rows of hills, as I mentioned, of the *Awachinſky*; the *Shatſe*, or top, making alone one third of its height. The circuit round the bottom of the mountain is near 300 verſts. The *Shatſe*, or top, is very ſteep on every ſide, and has ſeveral deep openings lengthways: the very ſummit

turns

133 turns gradually broadeſt from the falling in of the earth into the mouth of the burning gulph. It is ſo high, that in a clear day it is to be ſeen from the upper *Kamtſchatkoi* fort, which is about 300 verſts; and one cannot ſee other mountains, the *Tulbatchinſky* for inſtance, although they are much nearer. Before a ſtorm the ſummit appears ſurrounded with three girdles; the higheſt ſeems in breadth about the fourth part of the height of the mountain, from whence ariſes a continual thick ſmoke. The inhabitants ſay, that it throws out aſhes twice or thrice yearly, and ſometimes in ſuch quantities, that for 300 verſts around the earth is covered with them the depth of a verſhoke. From the year 1727 to 1731 the inhabitants obſerved that it burnt almoſt without interruption, but they were not under ſuch apprehenſions as in the laſt conflagration in the year 1737. This terrible conflagration begun the 25th of *September*, and laſted one week with ſuch violence, that to the people who were fiſhing at ſea near the mountain it appeared one red-hot rock, and the flames, which burſt through ſeveral openings, ſometimes ſhewed like rivers of fire with a ſhocking noiſe. Within the mountain were heard thunderings, crackling and blowing like the ſtrongeſt bellows, which ſhook all the neighbouring country: the nights were the moſt terrible. This conflagration ended as uſual, with throwing out a vaſt quantity of cinders and aſhes, of which however little fell upon the land, the whole cloud being almoſt carried by the wind to the ſea. It throws out porous ſtones and glaſs of different colours, which are frequently found in the brook *Boukoſſe*, which riſes out of this mountain. The 23d of *October* following at the lower *Kamtſchatkoi* fort happened ſuch a violent earthquake, that moſt of the houſes and ſtoves were thrown down, the bells of the churches rang, and the new church, which was built of thick balks of larch wood, was ſo much ſhaken that the joinings of the balks were all looſened. Some ſhocks were felt at times until the ſpring of the year 1738;

however the agitation of the waters was leſs than what had been /33 formerly obſerved. The earthquakes are ſaid to be more violent near a mountain that burns, than near one that has left off burning, or is not quite kindled.

Beſides theſe mountains, I heard of two other gulphs where ſmoke ariſes: one is called *Joupanoſky*; the other, *Shevelitche*; but there are ſeveral places farther north than the river *Kamtſchatka*: ſome of which emit ſmoke, and ſome fire: and there are in the *Kurilſki* iſlands, one upon the *Paromuſir*, and another upon the *Alaide*; concerning which Mr. *Steller* obſerves, that it is only one hill which burns, not a whole ridge; all theſe mountains have outwardly the ſame appearance, and it is, therefore, probable that their contents are much the ſame; that from the external appearance, one may judge of their internal contents, and of their aptneſs to take fire and burn; and that in all theſe which have ſmoked or burned formerly, but have been extinguiſhed, lakes are always found; whence he concludes, that as theſe were burnt down to the bottom, the waters ruſhing through the opened paſſages, filled the empty ſpace; and hence an account may alſo be given of the cauſe of the hot ſprings.

There are two hills which have left off burning; the *Apalſky*, out of which riſes the river *Apala*; and the *Biloutchinſky*, from which comes the river *Biloutchik*. At the bottom of this /36 hill is a lake, where vaſt numbers of herrings are caught in the months of *March*, *April*, and *May*.

CHAP.

CHAP. III.

Of the HOT SPRINGS.

/133 I Found the following hot ſprings: 1ſt, Upon the river *Oſernoi*, which runs out of the *Kurilſkoy* lake. 2d, Upon the river *Paudche*, which falls into the *Oſernoi*. 3d, Upon the river *Baano*, which is reckoned a branch of the Great River. 4th, Near the fort *Natchikute*. 5th, Near the mouth of the river *Shematchinſki*. 6th, Near the head of the ſame.

Theſe waters, which are upon the river *Oſernoi*, run in little ſprings from the ſouth bank; ſome fall directly into the river: others keep their courſe parallel to the river, and, joining after at ſome diſtance, fall together into the *Oſernoi*. Theſe ſprings are not conſiderable, nor very hot, only raiſing the thermometer (*Farenheit's*) which in the open air was at 45° to 145°.

The ſprings upon the *Paudche* are four verſts and a half diſtant from the firſt, and riſe out of the ground, upon the eaſt bank of the river in an open high hill which has a plain at the ſummit of 350 fathoms* in length, and 300 in breadth. This hill goes in a promontory towards the river, where it makes a a ſteep bank; but on the other ſide the deſcent is eaſy.

Several of theſe ſprings throw out their waters, like artificial water-works, about a foot, or a foot and a half, high, and with a great noiſe. Some of them ſtand in large pools like little lakes, and ſend out ſmall ſtreams, which, joining upon the plain, divide it, as it were, into ſo many iſlands, and at laſt fall in a conſiderable ſtream into the *Paudche*. That little lake marked by the letter Γ is remarkable for having an opening two fathoms deep.

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* The *Ruſſian* fathom is ſeven feet.

In the iſland are a great many openings, ſome very ſmall, and others above a foot diameter; but from theſe large openings iſſues no water, though the ſmall ones ſend out ſometimes water and ſometimes vapour with a very great force.

All thoſe places from which formerly iſſued out water, may be known by a various coloured clay which is found round them, for this clay is commonly thrown up by the waters. Sulphur is alſo found there, eſpecially about thoſe openings which emit vapours only.

Some ſprings likewiſe flow from that ſteep bank which we mentioned, two fathoms or more higher than the river. It is remarkable, that the ſtones of which this bank, and perhaps all the hill, is formed, are round, outwardly very dry, but within ſo ſoft that they may be rubbed between the fingers like clay: hence it has been conjectured, that the various coloured clay, which is found about the mouths of the ſprings, is nothing but theſe ſtones ſoftened by the moiſture and heat. The clay in taſte is ſour and aſtringent; and if a piece of it, or a ſtone, is broken, there appears an effloreſcence of alum, like a moſs, with the colours blue, white, red, yellow, green, and black, which are ſo mixed as to reſemble marble; and when the clay is not quite dry, the colours are pretty bright.

Oppoſite to the promontory of the hill is an iſland in the river *Paudche*, where there are likewiſe ſprings of hot water, but ſmaller than thoſe before mentioned.

A more diſtinct idea may be had of theſe hot ſprings from the ſubjoined plan, in which each ſpring is marked with a particular letter, with the different degrees of heat.

A TABLE *of the different degrees of heat which were found in each ſpring, by* De l'Iſle's *and* Farenheit's *thermometers.*

	De l'Iſle's	*Farenheit's*
The lake at the head of the ſtream Γ	80	116
The eye which is in the corner of that lake	65	134
The little lake into which the ſtream Γ falls	115	74
The ſpring out of which the ſtream 1 runs	50	152
The mouth of that ſtream where it falls into the lake — —	106	87
The mouth of the ſtream E where it comes out of the lake — —	95	98
The ſpring of the ſtream 2 — —	20	188
The little lake at the head of the ſtream 3	60	140
In the ſame lake at the mouth of the ſtream 3 — — —	80	116
Where this ſtream joins the ſtream 2 —	93	108
At the head of the ſtream N —	10	200
The mouth of this ſtream — —	55	146
The head of the ſtream K — —	80	116
Where this ſtream joins the ſtream N	95	98
Where both theſe ſtreams fall into the *Paudche* — — —	110	80

De l'Iſle's thermometer ſtood at this time, in the open air, at 136°, and that of *Farenheit's* at 49°.

The ſprings which are upon the river *Piaana* are not very different from thoſe of *Paudche.* They riſe upon both ſides of the river; and as upon the ſouth bank there is a high plain, and upon the north a cliff of rocks, the ſprings on the ſouth bank fall into the river in little ſtreams; but thoſe upon the north ſide run along the cliff, except one which riſes about 80 fathoms from the reſt, and where the cliff is more diſtant from the river, which has a courſe of 40 fathoms.

Amongſt the ſprings upon the ſouth bank it is to be remarked, that one place is full of openings of very different diameters, where the water is thrown up two feet and a half with a great noiſe. The thermometer, which in the open air ſtood at 185 degrees, roſe to 15 degrees.

The ſprings of the Great River fall into it in one conſiderable ſtream, which runs between ſtony hills in a narrow channel. The banks are boggy, and the bottom ſtony, covered with moſs. From its ſpring to the place where it falls into the Great River is 261 fathoms. At the ſpring the mercury roſe in *De l' Iſle*'s thermometer to 23, and *Farenheit*'s to 185, degrees; thence to where it falls into the River it grew cooler gradually, ſo that at the mouth *De l' Iſle*'s thermometer only roſe to 115, and *Farenheit*'s to 74, degrees; in the open air the one ſtood at 175, and the other at 14, degrees.

The hot brook, that is near the river *Shematche*, and falls into the Eaſtern Ocean, is much larger than any of the abovementioned. At its mouth it is three fathoms broad, and in ſome places near four feet deep, and its length is three verſts * and 88 fathoms. It runs between high ſtony hills with a ſtrong current: its bottom is a hard ſtone covered with green moſs, which in ſtill places ſwims upon the ſurface. Near the banks at its mouth, the heat is like that of ſummer water; and towards the head the graſs and plants upon the banks were green and ſome of them flowered in *March*. In going from this river to the laſt hot ſpring that lies upon the river *Shematche* one muſt paſs a great ridge of hills. Upon the eaſt ſide of this ridge, near the ſummit, is an even plain covered with round grey ſtones, without any plants growing upon it. Upon this plain in ſeveral places a vapour aſcends with great force, and a noiſe reſembling the

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* A *Ruſſian* verſt is 500 fathoms, or 3500 feet.

133 bubbling of water is heard. Here I dug, expecting to find water; but I found a ſtratum of ſuch hard ſtone that we could not dig through it. It is probable that the waters of the warm brook, that falls into the Eaſtern Ocean, have their origin from this place, for it is directly oppoſite to the riſe of that brook: and the laſt ſtream that falls into the river *Shematche* is likewiſe thought to derive its ſource from the ſame place, as it riſes from this ridge, upon the weſt ſide, in a deep hollow, ſurrounded with ſmoking hills. The very bottom itſelf is full of boiling ſprings for near a verſt and a half; all which join at laſt in one ſtream.

In this bottom are two large wells, that deſerve particular notice; one is five, the other three fathoms' diameter; the firſt one and a half, the other one fathom deep. In theſe the water boils up with white bubbles, and makes ſuch a noiſe, that one perſon cannot hear another in the common way of ſpeaking; nay, ſcarcely when he cries aloud. The vapour is ſo thick, that one cannot ſee a man at ſeven fathoms' diſtance; and the boiling of the water is only to be obſerved by lying down upon the ground. The earth between theſe wells yields like a bog, ſo that one is in continual fear of ſinking in. The water of theſe ſprings is diſtinguiſhed from all others by a black matter, like *Chineſe* ink, that ſwims upon the top, which ſticks ſo to the fingers that one cannot without difficulty waſh it off. They have, in common with other hot ſprings, clay, lime, alum, and ſulphur, of various colours. In all the abovementioned ſprings the water is thick, and ſtinks like rotten eggs.

823
778 The *Kamtſchadales* eſteem all the burning mountains, and places where hot ſprings ariſe, as the habitations of ſpirits, and approach them with fear; but, as the latter are the moſt dangerous, they are under the greateſt awe of them; and therefore they never willingly diſcover them to any *Ruſſian*, leſt they ſhould be obliged to accompany him near them. It was by chance that I heard of them after I had travelled 100 verſts from the

the place; but this natural phænomenon appeared ſo curious that 778
I returned to examine it. The people of *Shematchinſki* village 823
were obliged to declare the true reaſon why they had not formerly diſcovered them, and much againſt their will were forced to ſhew me the place, but would not go near it: and when they ſaw that we lay in the water, drank it, and eat things boiled with it, they expected to ſee us periſh immediately; but when they ſaw this did not happen, they told it in the village as an uncommon wonder, and were aſſured that we muſt be very extraordinary people ſince even the devils could not hurt us.

This is remarkable, that north from the mouth of the river 133
Kamtſchatka, and weſt along the coaſt of the river *Oſernoi*, there are no hot ſprings, although it abounds in *Pyrites*, ſulphur, iron ore, and ſtones that yield alum and vitriol. Mr. *Steller* obſerves, that the appearance of the country of *Kamtſchatka*, and the frequent earthquakes there, give reaſon to think that it is full of caverns replete with combuſtible matter, which taking fire in the bowels of the earth produces earthquakes, and makes thoſe vaſt alterations of which we ſee numerous inſtances in rocky ſhores being torn off both upon the *Beaver* ſea, and in the iſlands which lie between *Aſia* and *America*. The combuſtible matter, he tells us, is kindled by the ruſhing of the ſalt water into thoſe ſubterraneous caverns, through their apertures towards the ſea; which hypotheſis is ſtrengthened by his obſervation that the earthquakes are moſt frequent about the equinoxes, when the waves of the ſea are driven by the great ſtorms with uncommon violence upon the ſhores; and eſpecially about the ſpring equinox, at which time the water always riſes 823
higher than at any other: and the inhabitants of *Kamtſchatka* and the *Kuriles* know this ſo well, that they always fear the beginning of *March* and the end of *September*.

It is very extraordinary, that no iron has been diſcovered here, 135
although ſome ore is obſerved mixed with clay and earth, to which

133 which ſulphur being added the ſubterraneous fires may eaſily be
135 accounted for; nor do we yet know of any ſalt ſprings, although the narrowneſs of the iſthmus of the peninſula of *Kamtſchatka*, and ſo many ſubterraneous caverns under the rocky hills which have communication with the ſea, ſhould give us reaſon to conclude that there muſt be ſome.

After the hot ſprings we ought to take notice of the rivers which never freeze. Theſe are ſo common in *Kamtſchatka*, that there is ſcarcely one river which has not ſome very large openings, even in the moſt ſevere froſts; and the plains under the hills are ſo full of ſprings that one cannot go dry any where in the ſummer. Theſe ſprings, which joining make a little rivulet, and fall into the *Kleutchova Kamtſchatka*, never freeze, and yield fiſh almoſt the whole winter, which gives an advantage to the *Kleutchova*, as it furniſhes not only the *Kamtſchadales*, but all the people of the *Oſtrog* of *Niſhniſhantalſky*, with freſh fiſh, which is generally eſteemed, on account of its ſcarcity at that time, as a very great delicacy. This may alſo account for the wholeſomeneſs of all theſe waters, which the inhabitants drink after eating the fatteſt fiſh without the leaſt harm, although, in other places, cold water drunk upon fat fiſh produces the bloody flux.

CHAP.

CHAP. IV.

Of the METALS *and* MINERALS.

135

ALTHOUGH the peninſula of *Kamtſchatka* is hilly,
and the ground ſuch as might naturally be ſuppoſed to
produce metals and minerals, eſpecially iron and copper,
with which *Siberia* abounds; yet hitherto little has been diſ-
covered. This is no proof that ſuch ores are not in *Kamtſ-
chatka*; for, beſides that the *Kamtſchadales* are entirely un- 316
experienced, the *Ruſſians* who live here have as yet given 439
themſelves no trouble in the ſearch after metals; as they have ſuch
large quantities of iron and copper inſtruments brought to them,
that they have not only ſufficient for themſelves, but are alſo en-
abled to furniſh the *Kamtſchadales* and *Kuriles* with them at a
very conſiderable profit. It is alſo to be conſidered, that the 135
providing for their ſubſiſtance takes up ſo much of their time, 316
that they can ſpare but little for any thing elſe; and moreover,
the places proper for ſuch tryals are very difficult of acceſs: to
which it may be added, that the frequent ſtorms and general incle-
mency of the weather are great hindrances to ſuch tryals; eſpeci-
ally when every neceſſary for the undertaking muſt be carried upon
men's backs, for in the ſummer they can carry nothing upon dogs.
It is reaſonable to preſume that ore might be found in *Kamtſchatka*, 135
if it was worth while to ſearch for it. Copper ore has been
found about the *Kurilſkoy* lake, and the *Ivovoy* bay; and a ſandy
iron ore upon the banks of the ſeveral lakes and rivers; whence it
is expected that there is iron ore in the hills from which theſe
lakes and rivers riſe. Native ſulphur is gathered about the rivers
Kambalinſkoy and *Oſernoi*, and the *Kronotzkoy* cape. The ſul-

phur

135 phur which they bring from *Olontoſki*, where it drops from the rocks, is quite fine and pellucid; and in the *Pyrites* upon the coaſt it is to be found every where.

The following kinds of earth are common. Great quantities of white chalk are found about the *Kurilſky* lake; tripoly and oker about the Great River, and the villages of *Nachikin* and *Koutchinubiff*; and a purple-coloured earth about the hot ſprings, 135 and ſometimes a hard ſtony oker. Among the ſtones in the 324 mountains are found, but rarely, ſmall cherry-coloured chryſtals; and near the river *Charious* are found pieces of fluſſe, which is like a coarſe green glaſs, of which the inhabitants formerly made knives, axes, lancets, and darts. It is called by the *Ruſſian* natives glaſs, and by the *Kamtſchadales*, *nanagy*. This fluſſe is alſo found in the copper mines about *Ecatherinenbourg*, where it is called a topaz. There is likewiſe here a ſort of light ſtone, white like chalk, of which the inhabitants make plates, and lamps wherein they burn their fiſh oil; and every where upon the ſhore is found an iron-coloured hard ſtone, porous as a ſpunge, and eaſily turned by the fire.

The inhabitants find pellucid ſtones near the ſprings of the river, which they uſe inſtead of flints. Some of theſe ſtones are ſemi-pellucid, whitiſh and milky, and reckoned cornelians by the *Ruſſians*. Some ſmall pellucid ſtones of a yellowiſh colour, like corals, are found upon the banks of ſeveral rivers; and plenty of hyacinths near *Tomſkoy*.

135 Hitherto they have diſcovered no precious ſtones here. The hills 278 are firmer than thoſe in *Siberia*, and do not fall away like them; but when the earth falls off they find much *lac lunæ*; and a ſoft kind of bolus, of a fattiſh creamy taſte, is found near the *Penſchinſka* ſea, *Kurilſkoy* lake, and the *Olutorſkoy*: this is uſed as an excellent remedy in fluxes. I ſent ſpecimens of 135 moſt of the above things to the Muſeum of the Imperial Academy of *St. Peterſbourg*. I muſt not forget to mention

that amber is gathered here, near the *Penſchinſka* ſea, upon the river *Tegbil*, and farther north. 135

CHAP. V.

Of TREES *and* PLANTS.

THE moſt uſeful wood is the larch[*], and the white poplar[†], which ſerves for building their houſes and forts; and they are fit, not only for ſuch boats as the inhabitants uſe, but even for the building of ſhips. The larch-tree, indeed, only grows upon the river *Kamtſchatka*, and ſuch other rivers as fall into it: in other places they make uſe of the white poplar. The pine-tree[‖] and the black poplar[‡] are no where to be found upon the *Kamtſchatka*; and the pitch-tree[**] only in one place, and there in ſmall quantities. Although there be many birch-trees[††], yet they make little uſe of them, unleſs in their ſledges, having none near their houſes but what are crooked and uſeleſs; and it is very troubleſome to bring the better ſort from the diſtance at which it grows. 137 313

They make great uſe of the birch bark, which they ſtrip from the trees while yet green; and cutting it in ſmall pieces, like vermicelli, eat it with dried caviar. In the winter, whenever you enter any of their villages, you find the women employed in hacking this green bark with their bone or ſtone axes. They alſo ferment this bark with the juice or ſap of the birch, which makes an agreeable drink. The birches of 314 222 252 273

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[*] Larix.

[†] Populus alba.

[‖] Pinus.

[‡] Populus nigra.

[**] Picea.

[††] Betula.

The birches of
137 *Kamtſchatka* are much fuller of knots and hard excreſcences
322 than thoſe of *Europe*; but of theſe knots they make very uſeful
313 plates, ſpoons, and cups. Mr. *Steller* obſerved, that the white
372 poplar near the ſea was quite porous and light, which he attributed
to the ſalt water; that the aſhes of this wood, laid out in the open air, turned into a ſtony ſubſtance heavy and hard, which, the longer it lies, the harder and heavier it grows. This ſtone, when broken, ſhews ſome ſpecks of iron in its ſubſtance. Sallows * and alders † are the common fire-wood in *Kamtſchatka*.
137 The bark of the ſallow is uſed for food, and that of
262 the alder in dying their leather; as ſhall be related more at large
222 in another place. They have the tree tcheremough ‖ and the
314 hawthorn ‡ of two ſpecies, one yielding a red, and the other a black fruit; of theſe they lay up a great quantity againſt winter: they have likewiſe the ſervice-tree ** in great plenty, whoſe fruit is eſteemed amongſt their moſt delicate confections.

137 Their principal nouriſhment is from the nuts of the ſlantza,
262 which grows every where, both in hills and dales. This ſhrub, or tree, is truly of the cedar kind, only it is much leſs; and inſtead of growing ſtraight, it creeps along the ground. Its cones and nuts are not half ſo large as thoſe of the cedar: the *Kamtſchadales* eat them with the ſhells. Theſe, as well as the tcheremough and the hawthorn berries, are very aſtringent, eſpecially if eaten in any quantity. The greateſt virtue of theſe nuts is, that they are a good remedy againſt the ſcurvy, as all our ſeamen can witneſs: for in the moſt ſevere ſcurvy this is, as one may ſay, almoſt their only medicine; and from the tops of the ſlantza and cedar was their common drink made, ſometimes fermented, at other times drunk warm like tea; and orders were given by

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[*] Salices.

[†] Alni.

[‖] Padus foliis annuis. Linn.

[‡] Oxyanthus fructu rubro et nigro.

[**] Sorbus.

the commanding officer that the kettle with ſlantza and cedar tops 137
ſhould never be taken from the fire. Red currants, raſberries, 262
and kneſhnitza are very rare there, or grow at ſuch a diſtance 273
from their houſes that no one cares to go in ſearch of them. 222
The blackberries of the gimoloſt * are of great uſe, being of an
agreeable taſte, ſomething like new-fermented beer. The bark
of this ſhrub is uſeful in diſtilling brandy, giving ſtrength
and ſharpneſs to the ſpirit.

The juniper † grows every where; but they do not uſe the
berries, as they lay up great ſtore of moroſky ||, pianitza ‡, bruſh-
nitza **, klioukva ††, and vodinitza |||| : and when they have
great plenty of theſe berries they not only uſe them as confects,
but diſtil brandy from them, except from klioukva and vodinitza,
which yield no ſpirit. Mr. *Steller* writes, that the vodinitza is 386
no bad remedy for the ſcurvy; and the inhabitants dye any old 314
cloaths with it that have loſt a n-colour, to which it gives a
cherry-colour. Some boil it up with train-oil and alum, and dye
the beaver and coarſe ſables with it well enough to deceive the
unwary or ignorant. In many places they content themſelves 222
with roots and herbs, and make them ſupply not only their 262
want of bread, but of fiſh alſo. The principal of theſe 137
is the ſaranne, which ſerves inſtead of groats. It belongs to the
claſs of the lillies ‡‡; but as this ſort is never ſeen any where but
in *Ocbotſkoy* and *Kamtſchatka*, I ſhall give a deſcription of it. It 137
grows about half a foot high; has a ſtalk near the thickneſs of a
ſwan's quill, red below and green above. Its leaves grow in two

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* Lonicera pedunculis biflorio, floribus infundibuli formis, bacca ſolitaria, oblonga, anguloſa. GMEL. flor. Sib.

† Juniperus.

|| Chamemorus RAII Syn.

‡ Vaccinium Spec. 2. LINN. Bilberry.

** Vaccinium Bilberry Spec. 3. LINN.

†† Vaccinium Red Crowberry Spec. 4.

|||| Empetrum.

‡‡ Lillium flore atro rubente.

137 rows upon the ſtalk; the lower row having three leaves, and the upper four, placed croſsways: the form of the leaves is oval. Sometimes above the ſecond row one leaf grows juſt under the flower. Upon the uppermoſt part of the ſtalk grows one dark cherry-coloured flower, rarely two, ſomething leſs than that of the common lilly; and this is divided into ſix equal parts. The pointal in the center of the flower is triangular, at the top flat, and in three different cells contains flat reddiſh ſeeds. Round the pointal are ſix white ſtamina with yellow heads. Its root, which is properly the ſaranne, is about the bigneſs of a root of garlick, made up of many little cloves, whence it acquires a round form. It bloſſoms in *June*, at which time one can ſee no other flower over the whole fields.

222 The natives of *Kamtſchatka*, and the wives of the *Ruſſian*
252 Coſſacks, dig up the roots in the harveſt, or take them out
262 of the neſts of the field-n[illegible] 'ry† them in the ſun, and
435 ſell them for five or ſix rubles the pood. The ſaranne half boiled, and beat up with brambleberries, cranberries, or ſuch other of this kind, makes one of the moſt agreeable confections, being of a ſharp ſweetneſs; and if one had enough for every day's uſe, the want of bread would be tolerably

137 well ſupplied. Mr. *Steller* reckons five ſpecies of this plant: 1ſt. the kimtchiga, which grows near *Tegbil* and *Harioußkovoy*, in appearance like a large ſugar-pea, and if boiled taſtes much the ſame; but neither he nor I ever ſaw this plant in bloſſom: 2dly, the round ſaranne, which I have deſcribed above: 3dly, ovſenka *, which grows every where in *Siberia*, being roots of red lillies, whoſe flowers are all turned up in curls; the bulb is compoſed of an infinite number of ſmall cloves: 4thly, titichpa,

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* Lilium radice tunicata, foliis ſparſis, floribus reflexis, corallis revolutis. GMEL. flor. Sib.

† Defect in Original. Sentence probably reads: "field-mice to dry."

which grows upon the Great River; but neither he nor I ever 137
ſaw this in the flower: 5thly, matiſta ſladka trava *, or the 824
ſweet plant, is as uſeful in their oeconomy as the ſaranne; 263
for the *Kamtſchadales* uſe this not only as a confection in tarts
and broths, but in all their ſuperſtitious ceremonies this is abſolutely 273
neceſſary. The *Ruſſians* were no ſooner ſettled there, than 177
they found that brandy was to be diſtilled from it; and at
preſent this is the only brandy that is publickly ſold. The
root of this herb is without yellowiſh, within, white; and
of a bitter, ſpicy taſte. The ſtem is fleſhy, of three or four 137
joints, and about a man's height. Its flower is a reddiſh green, with ſhort white hairs, longeſt near the root. The leaves upon the ſtem neareſt the root are five or ſix, and ſometimes even ten: they grow upon thick, round, fleſhy, green, rough ſtalks, marked with little red ſpots. Upon the main ſtem, at every joint, ariſes one ſuch leaf, but without a ſtalk. The flowers are ſmall and white, like fennel, or other herbs of that ſort; and conſiſt of five leaves, of which the innermoſt are largeſt, and the outward ſmalleſt. It has two ovaria upon every flower, upon ſhort ſmall necks; and round them are five white ſtamina with green points, which riſe higher than the flower. The flowers, taken all together, reſemble a plate; while the ſtalks which ſupport the umbella are longeſt without, and in the middle ſhorteſt: ſtalks ariſe from every joint, upon which are flowers.

This plant abounds every where in *Kamtſchatka*, and the inhabitants 222
gather and prepare it in this manner: they cut off the 252
ſtalks of the leaves which grow neareſt the root, and with a ſhell

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* Sphondylium foliolis pinnatifidis. Linn. Cliff.

222 ſcrape off the ſkin; and then bind up ten ſtalks together.
252 When it begins to ſmell a little, then they put it in a bag to ſweeten; where it yields a ſweet duſt, which perhaps ſweats out from the pith of the plant. This herb-ſugar, as they call it, has ſomething the taſte of liquorice, and is not very pleaſant. A pood of the plant does not afford above a quarter of a pound of this duſt.

137 The women, when they gather this,[1] muſt wear gloves; for the
222 juice is ſo ſharp or cauſtic, than whenever it falls upon the fleſh it raiſes ſwellings and bliſters. For this reaſon, when in the ſpring the *Ruſſians* eat it freſh, they only bite it with their teeth, taking care not to touch it with their lips. I have ſeen inſtances of ſome that were unacquainted with this, who raſhly chewed it as they would do any other herb; upon which, not only their lips, but their chin, noſe, and cheeks, and alſo wherever the juice of this plant had touched, was immediately ſwelled up and full of bliſters; and although theſe burſt, yet the ſwelling continued for a whole week.

273 The manner of diſtilling ſpirits from it is as follows:---
556 They lay ſeveral bundles of this plant in a ſmall veſſel, upon which they pour hot water; and to make it ferment, they put in ſome berries of honey-ſuckle or cranberries, and binding the veſſel cloſe up ſet it in a warm place, where they leave it until the liquor ceaſes to make a noiſe; for during the time of fermentation, it cracks and bounces ſo much as to make the veſſel ſhake. In the ſame manner they prepare more wort in a large veſſel, and add to this, which now generally ferments in 24 hours, as above. They throw both the fermented herbs and liquor into the kettle, and cover it cloſe with a wooden cover; and inſtead of a pipe they take the barrel of a gun. The firſt running is as ſtrong as brandy; which, if they diſtil a ſecond time, produces a ſpirit ſo ſtrong that it conſumes even iron. But it

is

1. [the sweet herb, sphondylium foliolis pinnatifidis Linn. Cliff]

is only the richer ſort of people that uſe this brandy; and what 273
they ſell is only the firſt running, which makes a very good 556
dram.

Two pood of herbs[1] generally render one vedro * of the firſt 231
running, and the pood coſts four rubles or more. The herbs 273
that remain in the ſtill after drawing off all the ſpirit, are made
uſe of as a yeſt, inſtead of berries, to ferment other infuſions or
wort; and what they cannot uſe thus the cattle eat very greedily,
and it fattens them much. It is remarkable that brandy diſtilled
from the plants from which the ſkin has not been clean ſcraped, it
cauſes melancholy and perturbation of mind. Mr *Steller* made 273
the following remarks upon this brandy: 1ſt, that it is very
piercing, and contains a good deal of a ſharp acid, which coagulates
the blood and makes it black: 2dly, that a ſmall quantity
of it makes people drunk and quite ſenſeleſs, and cauſes their faces
to turn black: 3dly, that if a perſon drinks a few drams of it, he
is plagued the whole night with diſagreeable dreams, and next day
is uneaſy and diſturbed as if terrified with the apprehenſion of
the greateſt misfortune: and, what is very extraordinary, he has
ſeen ſome people the day after they have been drunk with this
ſpirit, from one draught of cold water, become again ſo drunk
that they could not ſtand upon their feet. They wet their hair 751
with the juice, which they ſqueeze out of this herb in the 824
ſpring, as a preſervative againſt lice, and find it to be their only 842
relief. Many of the *Kamtſchadales*, who deſire to have children,
will not eat this herb, green or dry, imagining that it impairs
the generative faculties.

The herb kipri †, which grows in all *Europe* and *Aſia*, 137
has the third place in the food of the *Kamtſchadales*. They 262

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* Vedro is a *Ruſſian* liquid meaſure containing 25 pints.

† Epilobium. Linn. Succ. Spec. 1. French willows.

1. [the sweet herb, Sphondylium foliolis pinnatifidis Linn. Cliff.

boil

They

252 boil it with their fiſh, and uſe the leaves as tea; but the greateſt
262 uſe is made of its pith, which, after having ſplit the ſtalks, they
273 ſcrape out with ſhells, and, tied up in bundles, dry it in the ſun.
It is then very pleaſant, and in taſte reſembles dried *Perſian* cucumbers. The *Kamtſchadales* uſe it in ſeveral diſhes, and ſerve it up green as a deſert. The kipri boiled gives a thick ſweet wort, that makes the beſt quaſſe [*] imaginable: it alſo affords them a very ſtrong vinegar, if to ſix pounds of the kipri they add a pound of the ſweet herb of ſphondilium, and ferment it in the uſual way: they get a great deal more brandy, when they uſe the infuſion of the kipri, inſtead of water, to prepare the ſweet herb for diſtillation.

278 They cure the navels of their children with this herb, chewing
137 it, and laying it upon the part. They grind the roots and ſtalks,
846 and uſe them inſtead of green tea, to which the flavour has ſome
reſemblance. The ſame uſe the *Kuriles* make of another ſhrub [†], which has flowers like the ſtrawberry, only yellow, and produces, no berries. This is called *Kurilſkoy* tea, and has great virtue in fluxes and gripes.

222 The wild garlick [‖] is not only uſeful in the kitchen, but alſo
252 in medicine. Both the *Ruſſians* and *Kamtſchadales* gather great
262 quantities, which they cut and dry in the ſun for their winter
757 proviſion; at which time boiling it in water they ferment it
a little, and uſe it as an herb ſoup, which they call *ſhami*. They eſteem the wild garlick ſo efficacious a remedy againſt the ſcurvy,
757 that they think themſelves in no danger ſo ſoon as it begins to

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[*] Quaſſe is a *Ruſſian* drink made of rye-malt, and flower, and very little fermented. Sometimes they add mint to it, and it makes no diſagreeable drink.

[†] Potentilla caule fruticoſa. LINN. Cliff.

[‖] Allium foliis radicalibus petiolatis floribus umbellatis. GMEL. flor. Sib. tom. 1. p. 49.

ſhew itſelf under the ſnow: and I have heard an extraordinary 757
account of its virtues from the Coſſacks that were employed with captain *Spanberg* in building the ſloop Gabriel: they were ſo ill with the ſcurvy, that ſcarce any were able to work, or even to walk, ſo long as the ground was covered with ſnow; but as ſoon as the high lands began to appear green, and the wild garlick to ſprout out, the Coſſacks fed upon it greedily. Upon their firſt eating it, they were covered over with ſcabs in ſuch a manner, that the captain believed they were all infected with the venereal diſeaſe. In about a fortnight, theſe ſcabs fell off, and they were perfectly recovered of the ſcurvy.

We muſt reckon amongſt the food of the *Kamtſchadales* the 137
ſhelmina *, and the morkovai †, which is the ſtalk of a plant 262
that is hollow and juicy, ſuch as the angelica. The ſhelmina is a ſpecies of the ulmaria. Its root is blackiſh without, and white within: it ſends out from one root two or three ſtalks about a man's height; which, near the root, are about a finger thick, but above, ſomewhat thinner. The leaves ſhoot out from long branches which grow all over the ſtalk. Their upper part is green and ſmooth; and their lower rough, with high reddiſh veins. Where the branch ſprings from the root there are two leaves like thoſe above deſcribed, but ſomewhat leſs. The ſtalk is triangular, reddiſh, hard, and rough. At the top of the plant is a flower reſembling that of the ſervice-tree. It has four oval piſtils, flattened in the ſides, with downy edges; in each of which are contained two longiſh ſeeds. They are ſurrounded by ten white ſtamina, riſing above the flower; the anthera being likewiſe white. It flowers about the middle of *July*, and the ſeeds are ripe about the middle of *Auguſt*. The root, ſtalks, and

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* Ulmaria fructibus hiſpidis. STELLER.

† Chæreoptylum ſeminibus levibus nitidis, petiolis ramiferis ſimplicibus. LINN. Cliff. p. 101.

137 leaves of this plant are very aſtringent: both the *Ruſſians* and
252 *Kamtſchadales* eat it in the ſpring. They preſerve the root[1] for
262 winter, which they ſtamp and boil for a gruel. It has ſome reſemblance in taſte to the Piſtacho nut.

The morkovai pouſhki, or carrot bunches, are ſo called becauſe they are like carrots in their leaf as well as in taſte. They likewiſe eat this green in the ſpring, but they oftener ſour it like ſour crout, or make a liquor with it.

137 The kotkonia * grows upon the banks of the rivers of *Kamtſchatka* in great plenty. Its root is about the thickneſs of one's finger, bitter and aſtringent, black without, and white within. Sometimes five, but always more than two ſtalks ariſe from this root, about ten inches high, of the thickneſs of a gooſe-quill, and of a yellowiſh-green colour. At the top are three oval leaves ſpread like a ſtar, from the middle of which riſes a ſtalk half an inch high, which ſupports the flower. The cup of the flower conſiſts of three oblong green leaves, and the flower itſelf of as many white ones. In the middle of the flower is the piſtil, of ſix ſides, a yellow colour, with a red top: it contains three cells, and is ſurrounded with ſix equal yellow-coloured ſtamina; the anthera is alſo yellow. When the piſtil is ripe it is as big as a walnut, is ſoft, fleſhy, and of an agreeable taſte, like a pleaſant apple. It flowers about
262 the middle of *May*. The *Kamtſchadales* eat the root of this plant both freſh and dried, with caviar; but the fruit muſt be eaten as ſoon as gathered, for it is ſo delicate that it ſpoils if it be kept one night.

137 The ikoume ‡, or biſtort, grows in plenty both on the hills and
262 in the vallies. The *Kamtſchadales* eat it freſh or dried, and

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* Tradeſcantia fructu molli eduli.

‡ Biſtorta foliis ovatis oblongis acuminatis. LINN. Cliff.

[1] [Shelmina, Ulmaria fructibus hispidis. pounded
Steller]

pounded with caviar. It is far from being ſo aſtringent as that in 137
Europe, is juicy, and taſtes like a nut. 262

Utchichlcy † is a plant that has leaves like hemp, but flowers like the ragwort. When the leaves are dried, and boiled with fiſh, they make the broth taſte as if the fleſh of the wild goat was boiled in it.

The root called here mitoui, and at *Jakutſki* ſardan, they fry in the fat of fiſh, or ſeals, and eſteem it a delicate diſh.

Theſe are the principal plants which they make uſe of in 262
their kitchens; however there is a great number of others, and 824
alſo of plants thrown out by the ſea, which the *Kamtſchadales* eat both freſh and dry in the winter: for, as Mr. *Steller* obſerves, they refuſe nothing, but eat every thing they can get down, even the drieſt plants and naſtieſt rotten muſhrooms, although one would imagine the conſequence dangerous, as indeed it ſometimes happens. However, he tells us the natives have obtained ſuch a knowledge of plants, and of their uſe both in food and medicine, that he is ſurpriſed; and that one ſhall not find ſo much knowledge of this ſort among any barbarous nation, nor even, perhaps, amongſt the moſt civilized. They give a name to every one of their plants, and know all their properties, and the different degrees of virtue which they derive from the various ſoils and expoſitions in which they grow; and ſo accurate are they in theſe diſtinctions, and alſo in the proper time of gathering the ſeveral fruits and other produce, that it is truly wonderful. Hence the *Kamtſchadales* have this advantage above other people, that they can find food and medicine every where; and, by their knowledge and experience, are in little danger from the noxious plants.

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† Jacobea foliis cannabis. STELLER.

137 Amongſt the medicinal plants we muſt mention the following:
278 1ſt, Kailoun, a plant which grows in all the ſwamps
near the rivers. The inhabitants uſe this as a cataplaſm in all
boils to make them ſuppurate; and taken in decoctions, they
imagine it produces ſweat, and drives away every infectious
humour. 2dly, The tchaban [*], which grows in plenty through
all *Kamtſchatka*, they uſe in decoctions for all pains and
ſwellings of the legs. 3dly, Katunatch [†], or wild roſemary, is
not ſo ſtrong as in other parts. The inhabitants have thought
it beneficial in the venereal diſeaſe, but in this are deceived.
4thly, The ſea oak [||] is thrown out by the waves; and being
boiled with the ſweet herb, a decoction of it is given in fluxes.
5thly, The ſea raſberry is given to women in labour, to promote
the birth. 6thly, There is yet another ſea plant, called yachanga [‡],
which the ſea throws out near to the *Kurilſkaya Lopatka*, reſembling
the whale's beard. This the inhabitants uſe in cholic
pains, infuſing it in cold water. 7thly, The omeg [**], or water
hemlock, grows upon all the rivers, and almoſt all the ſhore of
757 *Kamtſchatka*. This plant is made uſe of againſt pains in the
back in the following manner:---They put the patient into
a hut made exceedingly warm; and when he begins to ſweat
profuſely, they rub his back with the cicuta, being careful
not to touch the loins, for, what is very extraordinary, that
would occaſion ſudden death: however from this practice they
137 generally obtain great relief. 8thly, The zgate [††] muſt not
278 be omitted, whoſe dreadful qualities are but too well known
411 in all this part of the world. They anoint the points of their
darts and arrows with the juice which is ſqueezed from the

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[*] Dryas. LINN.

[†] Andromeda foliis ovatis venoſis.

[||] Quercus marina. CLUS. et LOB.

[‡] Species fuci.

[**] Cicuta aquatica.

[††] Anemonoides et ranunculus.

root of this plant, and the wounds which they give are incu- 137
rable unleſs the poiſon be ſucked out. This is certainly the 278
only method, and, if this be neglected, the wound immediately 411
turns blue and ſwells, and in two days the patient dies. The very largeſt whales when they have received a ſlight wound from ſuch a poiſoned weapon, cannot bear the ſea for any conſiderable time; but throwing themſelves upon the ſhore, expire moſt miſerably, with terrible groans and bellowing.

The following are very ſerviceable for cloathing, and other 137
houſehold purpoſes. 285

There grows upon the ſea-ſhore a whitiſh high plant, re- 314
ſembling wheat. I have ſeen it at *Strelinimuiſe*, the palace be- 286
low *St. Peterſbourg*, upon ſandy ground. Of this they make mats, which ſerve them as coverings and curtains; the beſt of theſe are made of different colours, with the beards of the whales ſplit very ſmall and dyed. They alſo make clokes of it, like the old *Ruſſian* milled clokes, ſmooth within, and rough without, which makes the rain run more eaſily off them. The prettieſt of this kind of work is their little bags and baſkets, in which the women keep their trinkets. Theſe are ſo neat, that one would take them to be made of ſplit canes; and they are ornamented with the hair of whales' beards and horſe-hair, dyed of different colours. When this plant is green they make large bags of it to contain their fiſh or different herbs and roots, which they provide againſt the winter: beſides it ſerves alſo to thatch their houſes or huts. They mow it with a ſcythe, made out of the ſhoulder-blade of a whale; which they whet ſo well by grinding it upon a ſtone, that they bring it to a very good edge.

In the marſhes there is found a plant reſembling the cy- 137
peroides. This they dreſs with a double-toothed comb of 314
bone, and uſe it to wrap their children in inſtead of ſhirts or 287
ſwaddling cloaths, to keep them clean and ſweet. They alſo 854
roll

They alſo

824 roll it[1] about their legs, and it ſerves for ſtockings. The women
291 wrap it round their bodies, from an opinion that the
842 warmth promotes fruitfulneſs. It ſerves to light their fires,
782 being eaſily kindled. On great holidays they bind garlands of
372 it about the heads and necks of their idols; and when they make any ſacrifice, or kill any wild beaſt, they offer ſome of this plant as an atonement, that the relations of the beaſt which is killed may be appeaſed. Formerly they did the ſame by the heads of their enemies: after having adorned them with theſe garlands, they performed ſeveral ſorceries, and then ſtuck them upon poles. The Coſſacks call this plant *tontchitze*.

314 Few plants are of more general uſe than the nettles; for
283 being without any kind of hemp, they would have no materials to make nets of for fiſhing, which is abſolutely neceſſary for the ſupport of life. They pull them up in the months of *Auguſt* or *September*, and binding them in bunches lay them to dry in the ſhade. When they dreſs them, they firſt ſplit them with their teeth, then peel off the ſkin, and beat them. After this they comb them, then ſpin them between their hands, and wind them up upon ſpindles. The thread of the firſt ſpinning, they uſe for ſewing, but to make their nets they double and twiſt it; which, after all, never laſt above one ſummer. The truth is they are very ignorant and unſkilful in this manufacture; and moreover they neither ſteep their nettles, nor boil their yarn.

1. [plant resembling cyperoides, which is dressed].

CHAP.

CHAP. VI.

Of the LAND ANIMALS.

136

THE principal riches of *Kamtſchatka* conſiſt in the great number of wild beaſts: among which are foxes, ſables, ſtone foxes, hares, marmottas, ermins, weaſels, wolves, rein-deer wild and tame, and ſtone rams. Their fox ſkins in the thickneſs, length, and beauty of their hair equal, if not excel, all the foxes of *Siberia*; beſides there are in *Kamtſchatka* almoſt all the different ſpecies of foxes which are to be found in other places, ſuch as the red, fiery, blue-breaſted, or marked with a black croſs, the cheſnut, black cheſnut, and the like; and ſometimes white foxes are found there, but theſe very ſeldom. It is remarkable, that the more valuable 224 foxes are the moſt cunning; ſuch are the black cheſnut, the 177 blue-breaſted, and the fiery coloured; ſo that not only the *Kamtſchadales*, but even the *Ruſſians* find it difficult to catch them. It happened while I was at *Kamtſchatka*, that the Coſſacks tried for two winters to catch one black fox which frequented the Great River, without being able to effect it. The moſt uſual method of taking them is either by poiſon, traps, or bows. The poiſon is thrown in lumps in the freſh tracts; the traps are ſet upon the ſides of hills, baited with a live animal; and for the greater ſecurity two or three of the traps are placed upon one hillock, that whatever way the foxes approach they may fall into one of them; and this is found neceſſary, for thoſe, which have been once in danger from the ſtroke of this trap, proceed afterwards ſo cautiouſly, that they eat the bait without being ſeiſed; but, with all their cunning, it is difficult for them to eſcape the

224 ſeveral traps, which ſeize them ſometimes by the head, and ſometimes
177 by the foot. The method of killing them with the bow
is thus: the hunters muſt know exactly how high to place it;
when the bow is bent, it is faſtened to a ſtake driven into the
earth near which the fox's tract is obſerved, and then a cord
drawn from the bow-ſtring, is ſtretched very tight over his ordinary
path; and ſo ſoon as this cord is touched with the foot of
the fox, the bow is diſcharged, and the arrow pierces the very
heart. Theſe are the inventions of the *Ruſſian* Coſſacks; for
formerly the *Kamtſchadales* gave themſelves no trouble about
the foxes, not valuing their furrs much more than dogs' ſkins.
They pretend they could have killed as many as they wanted
with ſticks, and that foxes were formerly ſo numerous in *Kamtſchatka*,
that when they fed their dogs, they were obliged to
136 drive them away from the trough: and though this may ſeem
224 improbable, yet it is certain, that even now they are in great
plenty near the forts, which at night they enter without any ſeeming
apprehenſion of danger from the dogs of the country, which
either cannot catch them, or, not being bred to it, do not mind
them. It happened when I was there, that one of the inhabitants
catched ſeveral of them in the pit where they keep their fiſh.
The beſt time to hunt foxes is, when the earth is hard frozen,
before the ſnow falls, as it is then difficult for them to dig out
the rats' neſts, which they do when the earth is thawed, the rats
224 being their chief ſupport. The *Kuriles*, who live upon the
286 *Lopatka*, catch foxes in a manner peculiar to themſelves. They
have a net made of the hair of whales' beards, compoſed of ſeveral
rings; this is ſpread upon the ground, and, to a ring in the
middle they bind a magpye; round the net is drawn a cord,
the ends of which are held by a perſon concealed in a pit
near at hand, who, when the fox ſprings upon the bird, draws
the cord and gathers together the net, which ſurrounds the fox
as the drag net does a fiſh.

The ſables of *Kamtſchatka* excel all other ſables of *Siberia*, 136
both in largeneſs, thickneſs of hair, and brightneſs; but in point
of blackneſs they do not come up to thoſe of *Olekmine* and *Vitime*:
however their other properties are ſo valuable, that the
Kamtſchatka ſables have by much the preference; and in *China*,
where they know how to improve the colour, fetch ſo great a
price that few of them are brought into *Ruſſia*. The ſables of
Tegbil and *Oukine* are moſt eſteemed, and are ſometimes ſold
for thirty rubles a pair. Mr. *Steller* ſays, that the worſt are
hunted about the *Lopatka* and *Kurilſkoy* ſeas. It often happens
that the worſt kind of ſables ſhall have their tails ſo black and
thick haired, that they will ſell dearer than any other.

Before the conqueſt of *Kamtſchatka* there was ſo great a 224
plenty of ſables that one hunter would kill ſeventy or eighty 651
in a year; and that not for the ſake of the furr, but the fleſh, 435
which they eſteem very delicious. The inhabitants at that time 136
willingly agreed to pay their tribute in ſables; and were glad
to receive a knife for eight, and an ax for eighteen. Some
merchants have gained in one year by furrs only more than
thirty thouſand rubles. The ſables are ſtill in much greater
plenty here than in any other country, as is obſerved by
every one who has been upon the ſpot, and compared their
tracts upon the ſnow with what are ſeen either upon the rivers
Lena or *Beloy*, and this even in the neighbourhood of the
forts. And if the people of *Kamtſchatka* were as induſtrious in 224
hunting as thoſe about the *Lena*, they could ſell a great many 461
more than they; but ſuch is their natural lazineſs, that they 426
never kill more than what they muſt pay in tribute, and what 185
will pay their debts. They look upon him as an extraordinary
good hunter that kills ſix or ſeven ſables in a winter; and ſeveral
are not able to furniſh their tribute furrs, but muſt borrow either
from the *Ruſſian* Coſſacks, or ſome more induſtrious hunter of

224 their own country, to whom for payment they are bound to
426 work the whole enſuing ſummer. Their baggage when they go
185 to hunt conſiſts of a net, a bow and arrows, a fire-ſteel with
461 flint and tinder. When they find a ſable concealed either in the
earth or under the root of ſome tree, they throw the net over
the place, in which he entangles himſelf when he comes out.
With the bow and arrows they ſhoot them when they fly to the
trees; and the ſteel and flint are to ſtrike fire, by which they
ſmoke them, and drive them out of their holes. The beſt
hunters, to be nearer the game, go out with their whole families to the hills, where they build huts and live the whole
winter.

224 Although the ſtone foxes, and hares, abound in *Kamtſchatka*,
237 yet hardly any one thinks it worth his trouble to hunt them,
136 their furrs being of ſmall value; and when they fall into the
fox traps, they uſe their ſkins as coverings in their beds. The
Kamtſchatka ſtone foxes are little better than the hares of
Tourouchan, which are very bad, the hair eaſily falling off.
Steller relates, that ſome uſed to ſew the tails of the ſtone foxes
to the hare-ſkins of *Tourouchan*, and impoſe them upon the
ignorant as true ſtone fox-ſkins, the thickneſs of the ſkin and
furr making it difficult to diſcover the cheat.

Marmottas * abound every where in *Kamtſchatka*. The
Koreki uſe their ſkins for cloaths; and, indeed, they are reckoned
no ordinary dreſs, being both light and warm. *Steller* compares
136 the furrs made of the backs of the marmottas to the ſpotted
feathers of birds, eſpecially if ſeen at a diſtance; and he alſo
ſays, that this animal is found both upon the continent and the

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* Marmotta minor. Gmel.

Iſlands of *America*. When they eat, they ſit upon their hind 136
legs like a ſquirrel, and hold their food, which is roots, berries, 224
and cedar nuts, with their fore feet. They are pretty to look
at, and whiſtle ſurpriſingly loud. No body thinks [1]his
while to hunt ermines *, weaſels †, or common marmottas ‡,
unleſs by chance they meet with them; ſo that one cannot
reckon ermines amongſt the furrs of *Kamtſchatka*. But there is 825
a creature of the weaſel kind, called the glutton ||, whoſe furr 237
is ſo greatly eſteemed above all others, that when they would 301
deſcribe a man moſt richly attired, they ſay that he is cloathed 291
with the furr of the glutton. The women of *Kamtſchatka*
dreſs their hair with the white paws of this animal, and reckon
them a very great ornament. However, the *Kamtſchadales* kill
ſo few of them, that they not only have not enough for exportation,
but even import ſome from *Jakutſki* at a very great
price. They put the greater value upon the furr of the glutton 825
the whiter and yellower it is, although every where elſe this ſort is 435
deſpiſed: nay, they eſteem it ſo much, that they ſay the heavenly
beings wear no other garments than of this furr; nor can
they make their wives or miſtreſſes a greater preſent than
of one of theſe ſkins, which was formerly ſold for thirty, and
even ſixty rubles; and for the two paws which the women wear
in their hair, they ſometimes give one, and ſometimes two ſea
beavers. The greateſt number of theſe gluttons is found near 136
Karaga, *Andirſka*, and *Kolima*. They have a ſurpriſing dexte-

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* Ermineum majus. GMEL.
† Ermineum minor. Ejuſdem.
‡ Marmotta vulgaris. Ejuſdem.

|| Muſtella ruſo-fuſca, medio dorſi nigro. LINN.

O 2 rity

[1] [Original torn. Probably "it worth"

136 rity in killing of deer, which they practiſe in this manner :—They climb up ſome tree, carrying with them a parcel of ſuch moſs as the deer uſe to eat. This they let fall from the tree, and if the deer [1] eat it, they throw themſelves down upon his back; then faſtening themſelves between the horns, they tear out his eyes, and give him ſo much pain, that the miſerable animal, to put an end to his torment, or if poſſible to free himſelf from the cauſe of it by deſtroying his enemy, ſtrikes his head againſt the trees, which generally kills him. No ſooner is he brought down than the glutton divides his fleſh carefully, and hides it in the earth, to ſave it from being ſeized by any other creature; and never eats a bellyful before he has done this. In the ſame manner, upon the river *Lena*, they deſtroy horſes. They are eaſily tamed, and are capable of learning ſeveral tricks. It has been ſaid, but we never heard it aſcertained, that they carry their gluttony to ſuch a degree as to be obliged to relieve themſelves by ſqueezing their over-ſwoln bodies between two trees to unburthen their bellies of the inſufferable load. Thoſe that are tamed are not ſo voracious; but perhaps theſe animals are not alike in all countries.

Bears and wolves are ſo numerous here, that they fill the woods and fields like cattle; the bears in ſummer, and the 136 wolves in winter. The bears of *Kamtſchatka* are neither large 752 nor fierce, and never fall upon people, unleſs they find them aſleep; and then they ſeldom kill any one outright, but moſt commonly tear the ſcalp from the back part of the head; and, when fiercer than ordinary, tear off ſome of the fleſhy parts, but never eat them. The people who have been thus wounded, are called *Dranki*, and are frequently to be met with. It is remarked here, that the bears never hurt women; but, in the ſummer, go about with them like tame animals,

eſpecially

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1. [Original torn. Probably "comes to."

136 eſpecially when they gather berries. Sometimes, indeed, the
752 bears eat up the berries which the women have gathered, and
this is the only injury they do them.

136 In the ſeaſon, when the fiſh enter the mouths of the rivers in vaſt ſhoals, great numbers of bears come down from the hills, and ſettle in proper places for catching them; which they do in ſuch plenty, that they only eat and ſuck the bones of the heads, neglecting the bodies; but when this plenty is paſt, they are glad to gnaw the bones which they formerly deſpiſed. They frequently ſteal fiſh from the fiſhing huts of the Coſſacks, although there is always a woman left to watch them. To her indeed they never do any hurt, ſatisfying themſelves with what fiſh they can find.

224 Before the introduction of fire-arms, they uſed ſeveral devices for killing the bears. Cutting ſeveral billets of wood, they ſtop up the mouth of the den with them, which the bear draws in that his paſſage may not be ſhut up. This they continue until he is ſo ſtraitened in his den that he cannot turn himſelf; then they dig down from above, and kill him with their ſpears. The *Koreki*, in order to catch the bears, ſeek out ſome tree that is crooked above, upon which they faſten a ſnare, and behind it place ſome proper bait; which the bear endeavouring to ſeize is held faſt by the head or the paw. They place heavy logs of wood, in ſuch a manner, that they will fall with the leaſt touch and cruſh them. Another method is to lay a board driven full of iron hooks in the bear's tract, and near to that they place ſomething that eaſily falls down; this frightening the bear by its fall, he runs upon the board with greater force; and finding firſt one fore paw wounded and ſeized by the hooks, he endeavours to free himſelf by beating the board with the other; thus both being fixed, he reſts on his hinder legs, which cauſes the board to riſe before his

eyes,

224 eyes, and perplexes him in ſuch a manner that he falls in a fury and beats himſelf to death. The people about the rivers *Lena* and *Ilime* have ſtill a more odd way of catching them. They place a nooſe upon the bear's tract or entrance to his den, faſtened at the end to a large log of wood; when the bear finds himſelf entangled, and that the log hinders his walking eaſily, he takes it up, and carrying it to ſome precipice, he throws it down with great force, which dragging him after it bruiſes him very much: however, he continues this 'till in the end he kills himſelf. This laſt method is ſomewhat like that which the *Ruſſians* uſe to preſerve their honey from the bears. They hang ſuch a log at the end of a long ſtring upon thoſe trees where the bees are hived; and when the bear, climbing up to get at the hive, finds himſelf interrupted by the log, he ſhoves it away; but returning it ſtrikes him again, and obliges him to toſs it with greater force, which makes it revert with ſtill greater upon himſelf. He continues this ſport ſometimes until he is killed, or falls from the tree.

The making bears drunk and killing them, or hunting them with proper dogs, is ſo common that I have no occaſion to ſay more about it.

One method is yet to be mentioned, which I have heard from people of reputation; namely that one man will kill ſuch bears as a whole company would be afraid to attack, and that without any other inſtrument than a ſtilletto, ſharp pointed at both ends, faſtened to a thong. The thong he wraps about his right arm up to the elbow; and taking the ſtilletto in this hand, and the knife in his left, he advances upon the bear, who, as uſual, ſtanding upon his hinder legs, and opening his mouth, attacks the hunter: but he, with great reſolution and addreſs, thruſts his hand into his throat; and placing there the ſtilletto, not only prevents him from ſhutting his mouth, but alſo gives him ſuch

exquiſite pain that the bear can make no further reſiſtance, and 224
allows the hunter to lead him wherever he pleaſes, or ſtab him
with his knife, without any danger.

The *Kamtſchadales*, however, look upon it as an affair of 224
ſuch conſequence to kill a bear, that whoever has this honour, 574
is obliged to feaſt all his neighbours; at which entertainment
the bear's fleſh is the principal diſh; and, as a trophy, the bones
of the head and thighs are hung round about their huts.

Of the bears' ſkins they make their beds and coverings, caps, 237
gloves, and collars for their dogs. The fleſh and fat are their 262
moſt delicate food; and the fat, when melted, is thin, and might 293
be very well uſed with ſallad. With the guts they cover their
faces in ſummer to keep off the ſun: ſometimes they uſe their
ſkins as ſhoe-ſoles, to prevent them from ſliding upon the ice;
and with their ſhoulder-blade bones, made ſharp, they cut
graſs.

From the month of *June* to the end of harveſt the bears are 136
very fat; but in the ſpring they are lean and dry. In the ſto- 825
machs of thoſe killed in the ſpring nothing is found but a frothy 237
ſlime: whence the inhabitants maintain the general opinion, that
the bear has no food throughout the whole winter, but ſupports
himſelf by ſucking his paws.

Although, as has been related above, wolves abound in *Kamtſ-*
chatka, and their furrs are in great eſteem for cloaths, yet few
are caught there. They differ in nothing from the wolves that 136
are found in other places. By their cunning and fierceneſs they
do more hurt to the inhabitants than their furrs bring profit;
for they kill not only the wild deer, but even herds of the tame,
notwithſtanding the latter have always a watch. Their fa-
vourite morſels ſeem to be the tongues of the deer, or even
of the whales that are thrown upon the ſhore: they ſometimes
ſteal the hares and foxes out of the traps and ſnares. White

wolves

136 wolves are very ſeldom ſeen here, and therefore they are much
262 more eſteemed than the grey. Although the *Kamtſchadales*
237 are called univerſal eaters, yet they never eat the fleſh of either
wolves or foxes. The deer and ſtone rams may be reckoned
among the moſt uſeful of all the animals in *Kamtſchatka*, becauſe
their ſkins are moſt uſed in cloathing. The inhabitants, however,
kill but few in proportion to the great numbers that are in
136 this country. The deer live in moſſy places, and the wild rams
224 upon the higheſt mountains; ſo that the hunters of the wild rams
237 leave their dwellings in the beginning of harveſt, and taking all
their families with them go to the hills, where they are employed in this chaſe until the month of *December*. The wild rams reſemble goats, but their hair is like the deers'. They have two horns that are twiſted round like the *Ordinſky* rams, but much larger. The horns of thoſe that are of full age weigh each of them from 25 to 30 pounds. They run very ſwiftly, throwing their horns back upon their ſhoulders; ſpring over rocks, and run upon the narrow ledges of the moſt dangerous precipices. Cloaths made of their ſkins are very warm. The fat upon their haunches is equal to that of the deer, and the fleſh is a moſt delicious food. Of the horns they make ladles, ſpoons, and other ſmall utenſils; and the horn entire they carry upon the road at their girdles, and uſe it for a bottle.

136 There are three kinds of rats; the firſt of which is of a brown colour, as large as the greateſt houſe-rats in *Europe*: but their cry is very different, reſembling the ſqueaking of pigs; otherwiſe they are very like our common rats. Of the ſecond kind there are but few, and theſe in the houſes, where they run about without fear, and live upon any offals. The third ſort have a diſpoſition ſomewhat like the drones among bees, laying up no manner of proviſion, but ſtealing their food from the firſt kind, which live in the fields, woods, and high mountains, in great

numbers. The tegulchitch, or firſt kind, have neſts very 136
roomy, neat, and ſpread with graſs, divided into different
apartments; in ſome of which they lay up the ſaranne quite
clean, in others rough; in others, again, ſeveral ſorts of roots,
which they gather in ſummer with great labour, and lay up
againſt winter. In dry ſunny days they drag theſe out of their
neſts, and dry them. During the ſummer they live upon berries,
and what elſe they can find proper for their food; never
touching their winter proviſion ſo long as they can find any food
in the fields. Among the ſeveral things found in their neſts,
I obſerved the ſaranne, the anacampſerus, biſtort, goats-beard,
burnet, and cedar nuts.

These rats change their habitations like the wandering tartars, 136
and ſometimes for a certain number of years they all leave 825
Kamtſchatka, and go to ſome other place. This retirement is 787
very alarming to the *Kamtſchadales*, who think it forebodes a
rainy ſeaſon and a bad year for the chace: but when theſe creatures
return, they confidently expect a fine one and good hunting;
ſo that, as ſoon as they begin to re-appear, expreſſes are
ſent to all parts to carry the good news. They always take
their departure in the ſpring, firſt gathering together in vaſt
numbers. They direct their courſe due weſt, croſſing rivers,
lakes, and even arms of the ſea; and when, after long ſwimming,
they reach the ſhore, they lie upon the banks, as if they
were dead, 'till at length they recover their ſtrength, and then
ſet out again upon their march. Their greateſt danger in the
water is leſt ſome ravenous fiſh ſhould ſwallow them up: but
upon the land they have nothing to fear; and the *Kamtſchadales*,
who are ſo greatly intereſted in their preſervation, when
they find them weak upon the banks of the rivers or lakes, they
give them any aſſiſtance in their power. From the river *Pengin* 136
they go ſouthward, and about the middle of *July* they generally
reach *Ochotſka* and *Judoma*. Sometimes their troop is ſo nu-

136 merous that travellers muſt wait two hours before they paſs. They return commonly to *Kamtſchatka* about the month of *October*. It is ſurpriſing that ſuch ſmall animals, in one ſummer, can paſs over ſuch an immenſe tract of land; and one cannot but admire the order and regularity which they obſerve in their march, as well as the foreknowledge they have of the change of weather.

825 Some of the inhabitants aſſured me, that when they go out of their neſts they cover their proviſions with poiſonous herbs, to deſtroy other rats that may come to rob their ſtore; and that, if all their winter proviſion is taken away, and nothing left that they can eat, in the ſtead of their own ſtores, they ſtrangle themſelves for vexation, ſqueezing their necks between the forked branches of ſhrubs: for which reaſon the *Kamtſchadales* never take away all their ſtore, and even pay for what they take by putting in either dried caviar, or ſomething that will ſerve the poor creatures for ſuſtenance. Although all theſe circumſtances are related by the moſt ſerious of the *Kamtſchadales*, yet we muſt not implicitly rely on their authority, before the facts are better enquired into.

231 The dogs of *Kamtſchatka* are extreamly like the common village dogs, and are white, black, ſpotted white and black, or grey like the wolves; brown or other colours being very rare. They are eſteemed ſwifter and longer-lived than any other dogs; and this may be attributed to their light ſimple food, which is fiſh. In the ſpring, every one lets his dogs run at liberty, without taking any care about them; for they can be uſed for travelling only while the ſnow is on the ground. They then feed upon what they can get in the fields, where they dig for the mice; and in the rivers they, as well as the bears, catch fiſh. In the month of *October* the *Kamtſchadales* call them home, and tie them up near their huts, 'till they loſe a good deal of their fat, that they may be lighter for the road, and then one

hears their continual howling night and day. In the winter 231
they are fed with opana and fiſh-bones, which are laid up
for them in ſummer. The opana is thus prepared :—As much
water as they think their dogs want they pour into a large trough,
and then throw in ſome ladlefuls of ſour or rather rotten fiſh,
which is prepared in pits for this purpoſe, adding to this ſome
fiſh-bones, and heating the whole with glowing ſtones until the
fiſh and bones be boiled. This opana is reckoned the beſt and
moſt agreeable food for the dogs, and they feed them with it
only at night, which makes them ſleep well; but never give
them any in the day when they deſign to travel, becauſe it
would make them heavy and lazy: though they be never ſo
hungry they will not touch bread; but rather than that, eat their
own bridles, reins, or harneſs, if they can get at them. How- 231
ever fond they may be of their maſter, yet, if he happens to 492
fall out of his ſledge, and loſe his hold of it, they run away
without regarding him; and he muſt walk on foot until the
ſledge be overturned, or catched and ſtopped by ſomething
or other; and therefore he ought to be careful never to loſe
his hold, but rather ſubmit to be dragged upon his belly
until the dogs tire. Beſides, upon any ſteep deſcent, eſpecially
the banks of rivers, one half of them muſt be unyoked, otherwiſe
they are not to be managed; for thoſe that appear quite tired
ſhew an uncommon vigour in ſuch places, and the more dangerous
the deſcent is the more ſtrength they exert. They are
in like manner unruly if they find the ſcent of the deer, or hear
the howling of other dogs in the villages near at hand. But for
all this, the dogs are, and always will be, abſolutely neceſſary
in *Kamtſchatka*, even although there ſhould be plenty of horſes;
for they could ſeldom be uſed in winter on account of the great
depth of ſnow, and the frequency of hills and rivers; and in
ſummer, the bogs are ſo frequent, that ſome places are impaſſable
even for men. Beſides dogs have this advantage over horſes; that

231 492 825 237 787 in the greateſt ſtorm, when a man cannot ſee the path, nor even keep his eyes open, they very ſeldom miſs their way; and if they ſhould, they go from one ſide to the other, 'till by the ſmell they find it again: and when it is abſolutely impoſſible to travel at all, which often happens, then the dogs lying round their maſter defend him from all danger. They alſo give certain ſigns of an approaching ſtorm; for, when they ſtop, if they ſcrape the ſnow with their feet, it is adviſeable, without loſs of time, to look out for ſome village, or other place of ſafety. And, it is ſaid, the dogs here ſerve inſtead of ſheep, becauſe their ſkins are uſed for cloaths; particularly thoſe of the white dogs, with which all their different ſorts of garments are trimed.

The number of dogs they put to a ſledge, how they break them, and what weight they carry, ſhall be mentioned hereafter, when we come to deſcribe the manner of travelling with dogs.

231 Thoſe which are bred up to hunt the deer and wild rams, ſables, foxes, and the like, are ſometimes fed with jackdaws, which, it is obſerved, make their ſcent the ſtronger for finding out birds and wild beaſts.

Beſides dogs, they have here cows and horſes, but no other domeſtic animals. There is no fit place to feed ſheep on, either upon the Eaſtern Ocean, or the ſea of *Pengine*; for the wet weather and the ſtrong juicy graſs would ſoon rot and deſtroy them. Near the upper *Oſtrog*, and upon the river *Koſireff*, ſheep thrive; the weather being fairer, and graſs leſs watry; but then there muſt be a good proviſion of hay made for them againſt the winter, the ſnow being too deep for them to find their food in the fields; for which reaſon, from the mouth of the river *Ilga* to *Jakutſki*, very few ſheep are kept.

CHAP.

CHAP. VII.

Of the VITIMSKY SABLES, *and the Method of hunting them.* 000

ALTHOUGH the ſable-hunting of *Vitimſky* does not
properly belong to the deſcription of *Kamtſchatka*, yet
as in treating of the latter we have had occaſion to mention
the ſable, I thought it might not be amiſs to give an account
of the various methods of this chace in different places.
The *Kamtſchadales* do not ſtir out for a fortnight or more after 224
a piece of ill-luck, or having hunted one day without game; 777
but the *Vitimſky* hunters ſpend almoſt the whole year in continual
toil, and are very happy, if, in that time, they catch ten
ſables for each man in company. It is true indeed, that ten common 000
Vitimſky ſables are equal to forty of *Kamtſchatka*: but,
notwithſtanding, if the inhabitants of *Kamtſchatka* would take
the ſame pains as thoſe of *Vitimſky*, they might exceed them
in the profits of hunting; for ſables are as numerous in *Kamtſchatka*
as ſquirrels are upon the river *Lena*. The *Vitimſky* hunting
is the more remarkable for being ſubject to many rigorous
laws and ſuperſtitious obſervations, which the hunters bind
themſelves to obſerve.

Before *Siberia* was conquered by the *Ruſſians*, it abounded 136
with ſables; but, at preſent, wherever the *Ruſſians* are ſettled,
none can be catched; for ſables retire at a diſtance from all
inhabited places, and live in deſolate woods and mountains.
The ſable hunters go up by the river *Vitime* and the two rivers 000
Mama, which fall into that river, as far as to the lake *Oronne*,
which is upon the right hand, as high and higher than the great
cataract, where the beſt hunting is. The fineſt ſables are caught
upon

000 upon the little river *Kutomale*, which falls into the river *Vitime*, upon the right hand above the cataract and mouths of the lower *Mama* and the brook *Petrova*. Lower than theſe places the ſables are conſiderably worſe; and all the hunters agree that nearer the heads of the rivers the ſables are better, and nearer the mouths ſtill worſe.

136 The ſables live in holes, like other animals of their kind; ſuch as martins, weaſles, and ermines. The hunters alſo relate, that they build themſelves neſts upon the trees with rods and graſs; that they ſometimes lie in their neſts and ſometimes in their holes; that in ſummer as well as in winter they lie about twelve hours in their holes or neſts, and in the other twelve they go about to ſeek their food. In the ſummer time, before the berries are ripe, they feed upon weaſels, ermines, or ſquirrels, but chiefly upon hares; and in the winter upon birds. When the berries ripen, they eat cranberries and hurtleberries, but principally thoſe of the ſervice-tree, which cauſes them to itch and rub themſelves againſt the trees, by which they wear off the hair from their ſides. Hence it happens, when the ſervice-berries are very plentiful, that the hunters loſe their labour.

The ſables bring forth their young in their holes or neſts, about the end of *March* or the beginning of *April*; and have from three to five at a time, which they give ſuck to from four to ſix weeks.

000 They never hunt ſables but in winter, for in the ſpring they caſt their hair; which in the ſummer is very ſhort, and even in the harveſt does not come to perfection. Such ſables are called *nedaſobili*; that is, imperfect ſables; and ſell at a low price.

The ſable-hunters, both *Ruſſians* and natives, begin to ſet out for hunting about the end of *Auguſt*. Some *Ruſſians* go themſelves, and others hire people to hunt for them, giving them proper cloaths and inſtruments for hunting, and proviſions for the time of their being out. When they return from the chace they give their maſters all their game, and reſtore them likewiſe all that they received, except their proviſions.

A company, that agrees to hunt together, aſſembles from ſix to forty men, though formerly there were ſometimes even fifty. They provide a ſmall boat for every three or four men, which they cover over; and take with them ſuch perſons as underſtand the language of the people amongſt whom they go to hunt, and likewiſe the places propereſt for hunting. Theſe perſons they maintain at the publick charge, and give them beſides an equal ſhare of the game.

In the above-mentioned boats every hunter lays 30 poods of rye-flower, of wheat-flower one pood, of ſalt one pood, and of groats a quarter of a pood. Every two men muſt have a net, a dog, and ſeven pood of proviſions for the dog, a bed and covering, a veſſel for preparing their bread, and a veſſel to hold leaven. They carry out very few fire-arms, as they only uſe them in the harveſt, while they live in their huts.

The above-mentioned boats they draw againſt the ſtream of the *Vitime*, and out of the *Vitime* up the river *Mama*, or as far up as the lake *Oronne*, where they build huts for themſelves if they find none ready. Here they all aſſemble, and live until the river be frozen over. In the mean time they chuſe for their chief leader one who has been ofteneſt upon theſe expeditions; and to his orders they profeſs an entire obedience. He divides the company into ſeveral ſmall parties, and names a leader to each, except his own, which he himſelf directs: he alſo appoints the places where each party muſt hunt. As ſoon as the ſeaſon begins, this diviſion into ſmall parties is unalterable, even although the whole company ſhould conſiſt only of eight or ten, for they never all go towards the ſame place. When their leaders have given them their orders, every ſmall company digs pits upon that road which they muſt go. In theſe pits they lay up for every two men three bags of flower againſt their return, when they ſhall have conſumed all their other proviſions; and whatever they have left in their huts, they are obliged to hide alſo in pits, leſt the wild inhabitants ſhould ſteal it.

As ſoon as the rivers are frozen over, and the ſeaſon is proper for the ſable-hunting, the chief of the leaders calls all the huntſmen into the hut, and, having prayed to God, gives orders to every chief of each ſmall company, and diſpatches them the ſame road which was before aſſigned them. Then the leader ſets out one day before the reſt to provide lodging places for them.

When the chief leader diſpatches the under leaders he gives them ſeveral orders; one of which is, that each ſhould build his firſt lodging to the honour of ſome church, which he names, and the other lodging places to the honour of ſuch ſaints whoſe images they have with them; and that the firſt ſable they catch ſhould be laid aſide in the quarter of the church, and at their return be preſented to it. Theſe ſables they call God's ſables, or the church's. The firſt ſable that is caught in the quarter of each ſaint is given to the perſon who brought the image of that ſaint with him.

On their march they ſupport themſelves with a wooden crutch about four feet long; upon the end of which they put a cow's horn, to keep it from being ſplit by the ice, and a little above they bind it round with a with and thongs, to hinder it from running too deep into the ſnow. The upper part is broad like a ſpade, and ſerves to ſhovel away the ſnow, or to take it up and put it into their kettles; for they muſt uſe ſnow, as they have frequently no water. The principal chief, having diſpatched the ſeveral ſmall parties, ſets out with his own. When they come to their places of lodging they build little huts of trees, and bank up the ſnow round them. They hew ſeveral trees upon the road, that they may the more eaſily find their way in the winter. Near every quarter they prepare their trap-pits, each of which is ſurrounded with ſharp ſtakes, about ſix or ſeven feet 000 high, and about four feet diſtant, and is covered over with boards to prevent the ſnow from falling in. The entrance through the ſtakes is narrow, and over it a board is hung ſo nicely, that by the leaſt touch of the ſables it turns and throws them into the trap; and they muſt abſolutely go this way to reach a piece of fiſh or fleſh with which the traps are baited. The hunters ſtay in one lodging until they have made a ſufficient number of theſe traps, every hunter being obliged to make twenty in a day; and ſo many do they make at every lodging place where they expect ſables. When they have paſſed ten of theſe quarters the leader ſends back the half of his company to bring up the proviſions that were left behind, and with the remainder he advances to build more huts and make more traps.

The people ſent back for the proviſions go with empty ſledges to the places where they were hoarded. Every man is obliged to draw ſix poods of flower, and half a pood of fleſh or fiſh, and to overtake the other hunters and their chief. Theſe carriers muſt ſtop at all the lodging places to ſee that their traps are in order, and take out any ſables they may find in them, and ſkin them, which none muſt pretend to do but the chief man of the company.

If the ſables are frozen, they thaw them by laying them under the cloaths with themſelves in bed. When the ſkin is taken off all preſent ſit down and are ſilent, being careful that nothing be hanging on the ſtakes. The ſkinned body of the ſable is laid upon dry ſticks, which they afterwards light; and carrying them three times round the body, they ſmoke it, and then bury it in the ſnow or earth. And often, when they apprehend the *Tunguſi* may meet with them and take away their booty, they put the ſkins into pieces of wood hollowed, covering the ends with ſnow, which being wetted will ſoon freeze. Theſe they hide in the ſnow near their huts, and gather them up

000 when they return in a body. When theſe carriers are come back with the proviſions then the other half are ſent for more; and thus they are employed in hunting, the leader always going before to build traps. When they find few ſables in their traps they hunt with nets, which they can only do when they find the freſh track of a ſable in the ſnow. This they follow until it brings them to the hole where the ſable has entered; or if they loſe it near other holes, they put ſmoaking pieces of rotten wood to them, which generally forces him to leave the earth. The hunter at the ſame time has ſpread his net, into which the ſable commonly falls; and for precaution his dog is alſo near at hand: thus the hunter ſits and waits ſometimes two or three days. They know when the ſable falls into the net by the ſound of two very ſmall bells that are faſtened to it. Upon this the hunter runs himſelf, and puts on the dog, which ſeizes the ſable and kills it: but they never put ſmoaky pieces of wood into thoſe holes that have only one opening, becauſe the ſable will ſooner be ſmothered than come towards the ſmoke; in which caſe he is entirely loſt.

When they trace the ſable to the root of ſome tree, they faſten their net about the tree, that, if after digging him out he ſhould eſcape their hands, he may be taken in it. If the track goes towards ſome tree where they can ſee the ſable, they ſhoot him with a blunt arrow: but if they cannot ſee the ſable upon the tree among the branches, they cut it down, and placing their net where the top of the tree is to fall, which they can judge, ſtand themſelves near the trunk; and the ſable, jumping from it as it falls, drops into the net. Sometimes this does not happen, and then they ſearch every hollow part of the tree. A ſable that has once been in a net or trap is ſcarcely to be deceived a ſecond time.

When the chief leader and all the hunters are gathered together, then the leaders of the ſmall parties report to the chief how many ſables or other beaſts their party has killed, and if 000 any of their parties have done any thing contrary to his orders and the common laws. Theſe crimes they puniſh differently: ſome they tie to a ſtake, others they oblige to aſk pardon of every one of the company; a thief they beat ſeverely, and allow him no ſhare of the booty; nay, they even take his own baggage from him, and divide it among themſelves. They remain in their head-quarters until the rivers are free of ice; and after the hunting they employ their time in preparing the ſkins. As ſoon as the ice is all gone off the rivers, they ſet out, in thoſe little boats which they came in, on their return home, where they give the ſables to the ſeveral churches to which they promiſed them; and then, having paid their tax-furrs, they ſell the reſt, dividing equally the money, or goods, which they receive for them.

CHAP. VIII.

Of the SEA BEASTS.

136

UNDER the name of ſea beaſts are here underſtood ſuch animals as are called amphibious, which, although they live for the moſt part in the water, frequently come upon the dry land, and upon, or near it, bring forth their young. Water beaſts may be divided into three claſſes: 1ſt, Thoſe which live in freſh water lakes, and rivers, as the otter. 2d, Thoſe which live in freſh or ſalt water, ſuch as ſeals. 3d, Thoſe which are never found in freſh water, ſuch as ſea beavers, ſea cats, and others.

Although otters be very common in *Kamtſchatka*, yet the 136 price is not low; a very indifferent ſkin will coſt a ruble. They 225

225 commonly hunt them with dogs when the ſnow comes in drifts, 237 and they wander at too great a diſtance from the river. They uſe their ſkins to make borders round their garments, but principally to preſerve the ſable-ſkins, which are obſerved to be preſerved better, when wrapt in otter-ſkins than any other way.

136 It is incredible to think what a number of ſeals there are in the ſeas and lakes of that country, eſpecially when the fiſh come up the rivers, which they follow in droves, not only to the mouth, but even far up the ſtream. So numerous are they that all the iſlands or ſand-banks are quite covered with them, inſomuch that ſmall boats are in great danger near theſe places. When the ſeals obſerve any boat approaching they throw themſelves in great numbers into the water, which makes ſuch a motion in it as will overſet the canoes or ſmall boats, if they go at once into it. No animal has a more diſagreeable cry, and their noiſe is inceſſant.

There are reckoned to be four ſorts of this animal; the very largeſt of which is catched from 56° to 64° of north latitude. This ſort only differs from the others in its bulk, which exceeds that of a large ox. The ſecond ſpecies is about the ſize of a yearling bullock. Their ſkin is of different colours, ſomething like the ſkin of a tyger; having ſeveral ſpots of equal largeneſs on the back, with a white and yellowiſh belly. Their young ones are as white as ſnow. The third is yet leſs than the former. Its ſkin is yellowiſh, with large cherry-coloured circles, which take up near the half of its ſurface. The fourth kind is ſeen in the large lakes of *Baikaal* and *Oronne*. Its ſize is like thoſe that are found near *Archangel*; and their colour is whitiſh.

They are very vivacious: I ſaw one, that was taken by a hook in the mouth of the Great River, throw itſelf upon people with great fierceneſs, even after its ſkull was broken into pieces. I obſerved that he was no ſooner brought on ſhore than he began to try to run again into the river; and when he /136 found that this was impoſſible, he began to weep; and when they beat and bruiſed him, it only made him more fierce and wild.

The ſeals never go farther from the ſhore than 30 leagues; and are moſt commonly to be found near the mouths of great rivers or bays: they will follow the fiſh 80 verſts up a river. They bring forth only one young one, which they nouriſh with two breaſts. The *Tunguſi* give the ſeals' milk to their children for a medicine. The old ſeals cry like one that ſtrains in vomiting, and the young like people groaning through pain. When the tide goes out they lie upon the dry rocks, and in play puſh one another into the water; but when they begin to be angry they bite one another very cruelly. They ſleep very ſound: but, being awakened by the approach of any one, they are in very great fear; and haſtening towards the ſea, to make the way ſmoother, as is ſuppoſed, they vomit out water.

There are different ways of killing them: In the rivers 225 they ſhoot them with ſcrewed-barrelled guns; but they muſt be careful to hit the head, becauſe a hnndred bullets will not do them the leaſt hurt in any other place, as they all lodge in the fat that covers their body. They ſearch for them upon ſhore, and ſurpriſing them in their ſleep kill them with clubs: or when they ſleep, laying their ſnout upon the ice, they drive a knife quite through the ſnout, which being faſtened to a long thong they drag the animal out.

The ſeals are not ſo dear as one would imagine the many uſes 237 they put them to ſhould render them; for, beſides the uſe of their fat and fleſh, the ſkins of the larger ſort ſerve for ſoles of ſhoes. The *Koreki*, *Olutores*, and the *Tchukotſkoi*, alſo make boats or baidares with them of different ſizes, ſome even ſo large that they will carry thirty men. Theſe boats have this advantage over

237 thoſe made of timber, in that they are much lighter and go
262 ſwifter. Of the ſeals' fat both *Ruſſians* and *Kamtſchadales* make
candles; and beſides the natives eſteem it ſuch a delicacy that
251 they can have no feaſt without it. The fleſh they boil or dry
in the ſun; but if there are great quantities, they ſmoke or bake
it in the following manner: They dig a large pit in proportion
to the quantity of fleſh or fat, and pave the bottom with ſtones.
Then they fill it with wood and light it below, continuing to add
fuel until it be as hot as any oven. After which they take out all
the aſhes, then lay at the bottom a layer of green poplar wood,
upon this another of ſeals' fleſh or fat, each ſeparately; and thus
alternately wood and fleſh until the pit be quite full. They then
cover it with graſs and earth, to keep in the heat; and after ſome
hours they uncover it, take out the fat and fleſh, and lay it up
for the winter. Both fleſh and fat thus prepared is much more
delicate than what is boiled; beſides, it keeps without ſpoiling
for a whole year.

825 When they have picked all the fleſh from the heads of the
796 ſeals they ſhew them all the reſpect that they would to a
particular friend that viſits them. I ſaw this ceremony in the
782 year 1740 at the little fort of *Krodakighe*, which ſtands upon a
river of the ſame name that falls into the Eaſtern Ocean. It was
performed in the following manner: They brought in the ſkull
or head of a ſeal, bound round with the ſweet graſs, and placed
it upon the floor. Then a *Kamtſchadale* entered with a bag
filled with the ſweet herbs and others, particularly a good deal of
birch bark, and placed it near the head; upon which two other
Kamtſchadales rolled in a great ſtone, and ſet it oppoſite to the
entry of the hut, about which they laid ſeveral ſtones; and two
others tore the ſweet herb, and made it into ſmall bunches. The
great ſtone was to ſignify the ſea, the ſmaller the waves, and the
bunches of the ſweet herb the ſeals. This being done, they took
three diſhes of caviar mixed with kipre, hurtleberries, and ſeals'
fat

fat. This they ſqueezed into balls, in the middle of which they 825
preſſed the ſweet herbs which were made to repreſent the ſeals: 796
out of the birch bark they made little boats, which they filled 782
with theſe balls made as above, and covered them with herbs.

After ſome time they took theſe boats and balls and toſſed them to and fro over the ſtones as if over waves, that the other ſeals might ſee with what reſpect the *Kamtſchadales* treated their friends, and conſequently might the more willingly fall into their hands. After this they placed the ſeals made of the ſweet herbs near to the great ſtone, or ſea, and all went out of the hut; but one old man, after he had ſet upon the threſhold a ſmall diſh with their broth which he had carried around them, entered into it again, all the aſſiſtants crying aloud four times the word *Lignoulcghe*. They could not tell what this term meant; nor could they give any other reaſon for their ſo crying out, but that their fathers did ſo. After this they again rolled the birch boats upon the ſtones; and going again out of the hut cried, as before, *Kouneouſhite aloulaighe*; that is, May the wind blow towards the ſhore. For while this wind blows a great deal of ice is driven towards the land, which is favourable for their killing the ſea animals. Returning into their huts, they rolled their birch boats a third time over the ſtones. They then put the ſkulls of the ſeals into a bag, and every fiſher preſent put in alſo a little of the ſweet graſs, with his name and ſome particular ſentence; that the ſeals might know how they had entertained them, and what valuable preſents they had made them.

Having, as they thought, by their entertainment and preſents, ſhewn all reſpects to their gueſts, they brought them out to the ſtair-head, where an old man put ſtill ſome more of their gruel into the bag, deſiring them to carry that to their friends that had been drowned at ſea. Then two *Kamtſchadales* who had been principally employed in this entertainment, took the bowls that

were

825 were filled with gruel and the ſeals made of graſs, and gave one
796 to each fiſher. They then went all out of the hut, and cried
782 *Uenic*; a word they uſe in calling to one another when they go to kill the ſeals or other ſea animals. Then taking out the ſeals made of graſs they threw them into the fire, praying them to make them frequent viſits; after which, returning into the hut, they put out the fire, and eat the gruel that was in the bowls.

136 The ſea horſe is but ſeldom ſeen about *Kamtſchatka*, and then only in the moſt northernly places. The moſt are caught near the cape of *Tchukotſkoi*, being both larger and more numerous there than any where elſe. Their teeth are what we commonly call fiſh-bone, the price of which depends upon their largeneſs or weight: the deareſt are thoſe that are about twenty pounds; but theſe are ſeldom met with, or even ſuch as weigh ten or twelve pounds, the common weight being five or ſix pounds.

The ſea lion * and cat, in their uſual ſtructure, differ very little from the ſea horſe and ſea calf, and are therefore to be reckoned of the ſame kind.

Some call the ſea lions ſea horſes, becauſe they have manes. In their ſhape they are like the ſea calf; and their necks are bare, excepting a ſmall mane of hard curled hairs: the reſt of their body is covered with a cheſnut-coloured hair. They have a middle-ſized head, ſhort ears, a ſnout ſhort and drawn up like a pug dog's, great teeth, and webbed feet. They are found moſt frequently about rocky ſhores or rocks in the ſea, upon which they climb very high, in great numbers. They roar in a ſtrange, frightful manner, much louder than the ſea calf; and they are thus far of uſe to people at ſea, that in foggy weather, by their roaring, they warn them of rocks or iſlands being near, as few rocks or iſlands in this part of the world are without theſe animals.

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* Leo marinus. STELLER.

Although in appearance and ſize this animal ſeems to be very 136 dangerous, and marches with ſuch a fierce mien that he looks like a true lion, yet is he ſuch a coward, that at the ſight of a man he hurries into the water; and when he is ſurpriſed aſleep, and awakened either by a loud cry or blows with a club, he is in ſuch fear and confuſion, that in running away he falls down, all his joints quaking with terror; but, when he finds no poſſibility of eſcaping, he will then attack his enemy with the greateſt fierceneſs, ſhaking his head and roaring very terribly; and then the boldeſt muſt ſeek to ſave himſelf from his rage. For this 225 reaſon the *Kamtſchadales* ſeldom kill the ſea lions at ſea, unleſs when they can ſurpriſe them ſleeping there, but generally upon land; and when they find them aſleep on ſhore they approach them with great caution, going againſt the wind. But none dare undertake this game, but ſuch as can truſt to their ſtrength or their heels. Stealing upon them, they ſtrike a knife into their breaſt under their fore paw; the aſſiſtants in the mean time tying a cord made of ſea calf's ſkin, which is faſtened to the knife, about a ſtake. Then every one runs off as faſt as he can, and endeavours at a diſtance to wound him with arrows, or knives, which they dart at him; and at laſt, when his ſtrength is quite waſted, they diſpatch him with clubs.

When they find them aſleep at ſea, they ſhoot poiſoned arrows at them, and get off as faſt as poſſible. The wounded animal, unable to ſuffer the pain ariſing from the ſalt water in the poiſoned wound, runs himſelf aſhore, where they kill him outright with darts or arrows; or if the place is not ſafe for ſuch an attack, they wait until he dies of his firſt wound, which follows in 24 hours. This game is ſo honourable among the natives, 554 that the man who has killed moſt of theſe beaſts is eſteemed the 225 greateſt hero: for this reaſon many engage in this dangerous hunting, not only for the fleſh, which is looked upon as very delicate, but rather for the honour that attends it. Two or

Two or
225 three ſea lions are a great load for their boats; and, as it is
502 eſteemed diſhonourable to leave any game which they have caught, they ſometimes ſo overload their boats, that, though they are very expert in the management of them, they and their game go to the bottom together. In theſe veſſels they go to the deſert iſland *Alaide*, which lies out at ſea about thirty miles, and are ſometimes carried four, five, and even eight days without ſeeing any land, expoſed to the cold of theſe climates; and without any compaſs, they return to their habitations by obſerving the ſun or moon.

237 Of the ſkins of the ſea lion they make cords, ſhoe-ſoles, and
136 ſhoes. The female has two, three, and ſometimes four young ones. They couple in the months of *Auguſt* or *September*; and are pregnant about ten months, as they generally bring forth their young about the beginning of *July*. The male treats the female with great tenderneſs, not like the ſea cat, but by fondneſs endeavours to gain her affection. Both male and female ſeem to take very little care of their young, frequently ſtifling them under their paws as they ſuck; nor do they ſhew
136 any concern at ſeeing them killed before their eyes. The young are not lively nor full of play, like moſt other young animals; but are almoſt continually aſleep. Towards the evening the male and female ſwim out to ſea with their brood, but not far from the ſhore. The young climb upon the mother's back, and reſt themſelves; the male in the mean time playing about toſſes the lazy puppies into the water, to oblige them to learn to ſwim. Some of them have been thrown into the ſea, but inſtead of ſwimming away they haſten again to land. They are twice as large as the young of the ſea cat. Although theſe animals naturally run from a man, yet it has been obſerved that they are not always ſo wild; particularly when their young have ſcarcely learned to ſwim. Mr. *Steller* lived ſix days in a high place amongſt whole herds of them, and out of his hut ſaw

ſeveral of their actions. The animals lay around him, ſeeming to obſerve his fire and what he was employed about; and never ran away, although he even went amongſt them, and ſeized ſome of their young for his diſſections, but remained quite at their eaſe. They went about and quarrelled for their miſtreſs without being diſturbed by his preſence; and one male fought three days for a female, and was wounded in more than a hundred places. The ſea cats never take any part in their quarrels, but endeavour to get out of the way as far as they can, giving place to them; nay, they never hinder the puppies of the ſea lion from playing with them, taking all care not to hurt them in the leaſt: but the ſea cats ſhun the company of the ſea lions as much as poſſible.

The old beaſts are grey about the head, and certainly live to a great age. They ſcratch their head and ears with their hinder paw, as the ſea cats do; and their manner of ſtanding, going, lying, and ſwimming, is the ſame. The great ones low like an ox, and the young bleat like ſheep: the old ones ſend forth a ſtinking ſmell, but not ſo much as the ſea cat. In winter and ſummer they do not always live indifferently upon all places, but ſeem to have their ſtations proper for the ſeaſon. They are never found further north than 56°, although in great plenty about *Kamtſchatka*, and the iſlands of the *American* coaſt. Their food is fiſh, ſeals, ſea beavers, or other water or land animals. The old ones eat little in the months of *June* or *July*, when they only lie and ſleep, and thence become very lean.

The ſea cat is about half the ſize of the ſea lion; in form reſembling the ſeal *, but thicker about the breaſt, and thinner towards

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* *Frederick Martens*, in his voyage to *Greenland*, thus deſcribes the ſea dogs, called *Rubbs* or *Seals*: "Their teeth are 'ſharp like dog's teeth; on their toes 'they have black, long, and ſharp 'claws; their tail is ſhort; they bark 'like hoarſe dogs, but their young mew 'like cats. When they are frightened by

towards the tail. They have a ſnout longer than the ſea lion's, and larger teeth; with eyes like cows' eyes, ſhort ears, naked and black paws, and black hair mixed with grey, which is ſhort and brittle. Their young are of a bluiſh black colour.

The ſea cats are caught in the ſpring and in the month of *September*, about the river *Shupanova*; at which times they go from the *Kurilſkoy* iſland to the *American* coaſt: but the moſt

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'by any noiſe, they hold up their noſes 'very high, and make a long neck like 'our greyhounds, and bark; and when 'thus alarmed we ſtrike them with half 'pikes, or long poles, upon their noſes, 'and knock them down half dead; but 'for all that they will recover them-'ſelves and riſe again. Some of them 'will ſtand on their defence, bite at, 'and run after us. Sometimes they run 'from the ice to the water, and leave a 'yellow dung behind them, which they 'ſquirt out at their hunters. Their fat 'is about three or four fingers thick, 'and covers the fleſh juſt under the ſkin. 'They have great livers, lungs, and 'hearts. When they couple they are ſo 'fierce, that we are obliged to kill 'them from our boats, no man daring 'to go near them. One of them near 'eight feet long was not killed, though 'we had cut off moſt of his fat, and 'notwithſtanding all our blows would ſtill 'bite and ſnap at us. I ran another 'ſeveral times through the body with 'my ſword, which he did not in the 'leaſt regard; he at laſt got up, and 'ran ſwifter than I could, and flung him-'ſelf off from the ice into the ſea, and 'went down to the bottom.'

From the ſame author we have alſo the following account of the ſea horſe. 'It 'is imagined that theſe animals, ſays he, 'feed both on herbs and fiſh; that they 'eat herbs we conclude from the reſem-'blance between their dung and that of 'the horſes', and we ſuppoſe they eat 'fiſh from this circumſtance, when we 'threw the ſkin and fat of a whale into 'the ſea, one of theſe creatures came and 'drew it under water with him. They 'are remarkable for their courage and 'ſtrength, and the reſolution with which 'they defend each other is ſurpriſing; for 'when any were wounded by my people, 'they made to the long boat, and with 'their great teeth cut holes in it under 'water, whilſt others moſt undauntedly 'erected half their body out of the water 'and endeavoured to get into the boat. 'In one of theſe engagements a ſea horſe 'took hold of our harpooneer with his 'long tooth by the waiſtband of his 'breeches, and had not the waiſtband 'broke, would certainly have pulled 'him over-board. At *Muff*'s iſland we 'killed ſeveral hundred of them, and 'made a very good voyage. When 'they are killed the ſailors only bring 'off the head, as nothing but the two 'great teeth are of any value; theſe 'alſo were formerly in greater eſtimation 'than they are at preſent.'

are catched about the cape of *Kronotzkoy*, as between this and 136
the cape *Shupinſkoy* the ſea is generally calm, and affords them properer places to retire to. Almoſt all the females that are caught in the ſpring are pregnant; and ſuch as are near their time of bringing forth their young are immediately opened, and 825
the young taken out, and ſkinned. None of them are to be ſeen from the beginning of *June* to the end of *Auguſt*, when they return from the ſouth with their young. The natives were formerly at a loſs to conceive where ſuch great herds of pregnant fat animals retired in the ſpring, and why they returned ſo weak and lean in the ſummer: they conjectured, that as they thus regularly ſwam from the ſouth in the ſpring, and returned in the ſummer, their being ſo lean was owing to their fatigue.

The females bring forth their young there, and being at reſt 136
recover their former ſtrength; they nurſe their young ones three months, 'till they are able to return with them to their former habitations in the ſummer. The females ſuckle their young with two teats, which are placed between their hinder paws; they have ſeldom more than one; and when they bring forth they gnaw off the navel ſtring like a dog, and greedily eat the after-birth. The young ſee when they are whelped, their eyes being as large as the eyes of an ox; and have thirty-two teeth, not reckoning their tuſks, two of which are on each ſide, and begin to appear the fourth day after their birth. Their colour at the firſt is a dark blue; but in four or five days grey hairs begin to appear between their hinder legs, and at the end of one month their belly is black and grey. The male is born larger and blacker, and even continues blacker than the female, which turns almoſt of a blue colour as ſhe grows up, having only grey ſpots between her fore legs. The male and female differ ſo much in the form and ſtrength of their bodies, that one who does not carefully examine them would take them for different ſpecies of animals

mals; beſides the females are mild and fearful. The male has from eight to fifteen, and even ſometimes fifty females, whom he guards with ſuch jealouſy that he does not allow any other to come near his miſtreſſes: and though many thouſands of them lie upon the ſame ſhore, yet every family keeps apart; that is, the male, with his wives, young ones, and thoſe of a year old, which have not yet attached themſelves to any male; ſo that ſometimes the family conſiſts of 120. They likewiſe ſwim at ſea in ſuch droves. Such as are old, or have no miſtreſſes, live apart; and the firſt that our people found upon *Bering*'s iſland were ſuch old ones, and all males, extremely fat and ſtinking. Theſe ſometimes lie aſleep a whole month without nouriſhment, and are the fierceſt of all, attacking all that paſs them; and their pride or obſtinacy is ſuch that they will rather die than quit their place. When they ſee a man coming near them, ſome of them ruſh upon him, and others lie ready to ſuſtain the battle. They bite the ſtones that are thrown at them, and ruſh the more violently upon him who throws them; ſo that though you ſtrike out their teeth with ſtones, or put out their eyes, yet even blind they will not quit their place: nay, they dare not leave it, for every ſtep that any one moves off he makes a new enemy, ſo that though he could ſave himſelf from the attacks of men, his own brethren would deſtroy him; and if it happens that any one ſeems to retire the leaſt, then others draw near no prevent his running away; and if any one ſeems to ſuſpect the courage of another, or his deſign to run away, he falls upon him. This ſuſpicion of one another is ſometimes carried ſo far, that for a whole verſt one ſees nothing but theſe bloody duels; and at ſuch a time one may paſs them without any manner of danger. If two fall upon one, then ſome others come to ſupport the weakeſt; for they do not allow of unequal combat. During theſe battles the others that are ſwimming in the ſea raiſe their heads, and look at the ſucceſs of the combatants; at length becoming likewiſe fierce, they come out and increaſe the number. /36

Mr. *Steller* made this experiment:—With his Coſſacks he fell upon one of theſe ſea cats, and put out his eyes, and irritated four or five more by throwing ſtones at them. When theſe purſued him he ran towards the blind one, who hearing the running of his companions, and not knowing whom they purſued, attacked them. Mr. *Steller* retired to a high place, where he obſerved the battle for ſome hours. The blind one attacked without diſtinction all the reſt, even thoſe who took his part; ſo that at laſt they all fell upon him, and allowed him no reſt either upon the land or in the ſea, out of which they dragged him to the ſhore, and beat him until he died.

When two of them only fight, the battle laſts frequently for an hour: ſometimes they reſt awhile, lying by one another; then both riſe at once, and renew the engagement. They fight with their heads erect, and turn them aſide from one another's ſtroke. So long as their ſtrength is equal they fight with their fore paws; but when one of them becomes weak the other ſeizes him with his teeth, and throws him upon the ground. When the lookers on ſee this they come to the aſſiſtance of the vanquiſhed. The wounds they make with their teeth are as deep as thoſe made with a ſabre; and in the month of *July* you will hardly ſee one of them that has not ſome wound upon him. After the end of the battle they throw themſelves into the water to waſh their bodies. The occaſions of their quarrels are theſe: —The firſt and moſt bloody is about their females, when one endeavours to carry off the miſtreſs of another, or the young ones that are females; the females that are preſent follow the conqueror. The ſecond is about their places, when one comes too near that of another, which they don't allow, either for want of room, or becauſe they are jealous of their coming too near

their

/136 their miſtreſſes. The third is owing to their endeavouring to do juſtice, and end the quarrels of others.

The male is very fond of the young ones; on the other hand, the females and young fear him extremely, and he treats them moſt tyrannically. If you endeavour to catch a young one, the male ſtands upon the defence, and the female is allowed to ſave herſelf and the young one by flight; but if ſhe drops the young one out of her mouth, the male leaves his enemy, and ſeizing upon her with his teeth beats her againſt the ſtones 'till he leaves her for dead. As ſoon as ſhe recovers, ſhe crawls to his feet, which ſhe licks and waſhes with her tears that flow in abundance. In the mean time, the male ſtalks backwards and forwards, gnaſhing his teeth, and toſſing his head like a bear; at laſt, when he ſees they have carried off the young one, he likewiſe begins to weep; for they ſhed tears, when they are much wounded or injured, and are not able to revenge the injury.

Another reaſon of the ſea cats going in the ſpring eaſtwards to the Deſert Iſlands muſt be, that reſting and ſleeping without nouriſhment for three months, they free themſelves from the fat which was troubleſome to them, in the ſame manner as the bears who live the whole winter without nouriſhment; for in the months of *June*, *July*, and *Auguſt*, the old ones do nothing but ſleep upon the ſhore, lying in one place like a ſtone, now and then looking at one another, and yawning and ſtretching, without meat or drink; but the young ones begin to walk in the beginning of *July*. When this animal lies upon the ſhore and diverts himſelf, his lowing is like that of a cow; when he fights, he growls like a bear; when he has conquered his enemy, he chirps like a cricket; but being vanquiſhed or wounded, he groans or mews like a cat; coming out of the water, he commonly ſhakes himſelf, ſtrokes his breaſt with his hinder paws, and ſmooths the hair upon it. The male lays his ſnout to that of the females, as if he was kiſſing her. When they ſleep in the /36 ſun, they hold up their paws, wagging them as the dogs do their tails. They lie ſometimes upon their backs, at other times like a dog upon their bellies; ſometimes contracting, at other times extending themſelves. Their ſleep is never ſo ſound but that they awake at the approach of any perſon, how ſoftly ſoever he goes, and are preſently upon their guard; beſides their ſmell and hearing are ſurpriſingly acute.

They ſwim ſo faſt that they can eaſily make ten verſts in an hour; and when they happen to be wounded at ſea they ſeize the boats of the fiſhers with their teeth, and drag them along with ſuch ſwiftneſs that they appear to fly and not to ſwim upon the water. By this means the boat is frequently overturned and the people drowned, unleſs he who ſteers it be very ſkilful, and obſerves the courſe of the animal. As they have a *foramen ovale*, they can keep long under water; but when they grow weak they come to the top to receive freſh air. They often ſwim upon their back, and ſo near the ſurface of the water that their hinder paws are frequently dry. When they go from the ſhore into the water, or when they dive after having taken breath, they turn themſelves like a wheel, as many other large ſea animals do. They faſten their fore paws in the rocks, and thus draw up their body, which they can move but ſlowly in ſuch places, but upon a plain, one is in danger of being overtaken by them. Upon *Bering*'s iſland there are ſuch numbers of them that they cover the whole ſhore; ſo that travellers are frequently obliged for ſafety to leave the ſands and level country, and go over the hills and rocky places. It is remarkable that in this iſland the ſea cats are found only upon the ſouth coaſt which looks towards *Kamtſchatka*. The reaſon of this may be, that this is the firſt land they meet with going eaſt from the *Kronotzkoy* Noſs.

000 The manner of catching them in *Bering's* iſland was
this: They firſt ſtruck out their eyes with ſtones, and then killed
them by beating out their brains with clubs: but this was a
work of ſo much labour, that three men were hardly able to kill
one with 300 ſtrokes; and though ſometimes the ſkull was
broken in pieces, and the brains came out, and all their teeth
beaten out, yet they would keep their place, ſtanding upon their
hinder paws, endeavouring to defend themſelves. One of
them thus miſerably treated was left to ſee how long it would
live, which it did full two weeks without quitting its place.
225 They[1] ſeldom come aſhore about *Kamtſchatka*; ſo that the in-
habitants chace them in boats, and throw darts or harpoons at
them, which ſtick in their body; to this harpoon is fixed one
end of a rope, and the other is in the veſſel; and by this rope they
draw them towards the boat; but here they are to be particularly
cautious whenever they chace one, if he comes near, not to ſuffer
him to faſten upon the ſide of the boat with his fore paws, and
overturn it; to prevent which ſome of the fiſhermen ſtand ready
136 with axes to cut off his paws. Several of theſe animals die of
old age, but the greateſt part of the wounds they receive in the
quarrels that happen among them; of which there are ſometimes
ſo many, that the ſhore is covered with bones.

The ſea beavers * have not the leaſt reſemblance of the other beavers; but the people formerly gave them that name from their downy hair, which reſembles that of the beaver. They are as large as the ſea cats; their ſhape reſembles the ſeal, and their head the bear; their fore feet are longer than their hind feet; their teeth ſmall; their tail ſhort and flat, and ſharp towards the point; their hair is thick and black as pitch,

1. [the sea cats]

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* Lutra marina.

but in the old ones it turns grey. The young ones have 136
their hair long, browniſh, and very ſoft. This is the moſt peaceable of all the ſea animals; it never makes any reſiſtance, but endeavours to ſave itſelf by flight. The females are very affectionate to their young, and carry ſuch as cannot ſwim upon their belly between their fore feet; for until the little ones can ſwim themſelves the mother ſwims upon her back. When the fiſhermen purſue them, they never quit their young' till the very laſt extremity; and if they ſhould happen to ſlip them they preſently return to where they hear them cry; ſo that the fiſhers endeavour to kill or catch the young, as the moſt effectual method of taking their dams. They have three different ways of catching 225
them: 1ſt. By nets placed among the ſea cabbage*, whither the beavers retire in the night time, or in ſtorms. 2dly, They chace them in their boats, when the weather is calm, and kill them in the ſame manner they do ſea lions or ſea cats. The third method is upon the ice, which in the ſpring is driven on the coaſt by the eaſt wind; and this laſt is ſo general, that when the ice is driven ſo ſtrongly upon the ſhore that the people can paſs upon it with ſnow ſhoes, they conſider it as an acquiſition of great treaſure, and all the inhabitants upon the coaſt hunt and kill vaſt numbers, as they ſtalk along the ice ſeeking an opening to get into the water. However, ſuch a drift of ice upon the coaſt does not happen every year, but when it does, they call it a good year; for the natives, Coſſacks, and merchants, find a great advantage from this trade. The *Kuriles* did not 237
eſteem the ſkins of beavers more than thoſe of ſeals or ſea lions 291
before they ſaw the value that the *Ruſſians* put upon them; and even now they will willingly exchange a dreſs made of beavers'

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* Focus marinus.

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

237 for a good one made of dogs' ſkins, which they think are warmer,
291 and a better defence againſt the water.

136 Beſides thoſe already deſcribed, there are ſeveral other ſea animals here, the moſt remarkable of which is the manati, or ſea cow. This animal never comes out upon the ſhore, but always lives in the water; its ſkin is black and thick, like the bark of an old oak, and ſo hard that one can ſcarcely cut it with an ax; its head in proportion to its body is ſmall, and falls off from the neck to the ſnout, which is ſo much bent that the mouth ſeems to lie below; towards the end the ſnout is white and rough, with white whiſkers about nine inches long; it has no teeth, but only two flat white bones, one above, the other below; its noſtrils are near the end of its ſnout, in length and breadth about an inch and a half; they are double, and within are rough and hairy; its eyes are black, placed almoſt in the middle, and near in one line with the noſtrils, they are no larger than ſheep's eyes, which is certainly remarkable in ſuch a monſtrous creature; it has no eyebrows nor eyelaſhes; and its ears are only a ſmall opening; its neck is not eaſily diſcovered, the head and body being ſo nearly joined; however, there are ſome vertebræ proper for turning the head upon, which it actually does, particularly when it feeds, hanging its head like a cow; its body is round like that of a ſeal, being thickeſt about the navel, and growing ſmaller towards the head and tail; the tail is thick, and bent a little towards the end; it ſomething reſembles the beard of the whale, and ſomewhat the fins of a fiſh; its paws, which are under its neck, are about 21 inches long, with them he both ſwims and goes, and by them he takes hold of the rocks, to which he ſometimes faſtens himſelf ſo ſtrongly, that when he is dragged from thence with hooks he will leave the ſkin of his paws behind: it is obſerved that theſe paws are

ſometimes divided in two, like the hoof of a cow; but this does not ſeem to be common, only accidental. The females have two teats upon their breaſts. The length of the manati is about 28 feet, and its weight about 200 pood. Theſe animals go in droves in calm weather near the mouths of rivers; and though the dams oblige their young always to ſwim before them, yet the reſt of the herd cover them upon all ſides, ſo that they are conſtantly in the middle of the drove. In the time of flood they come ſo near the ſhore, that one may ſtrike them with a club or ſpear; nay, the author relates that he has even ſtroked their backs himſelf with his hand. When they are hurt they ſwim off to ſea, but preſently return. They live in families, one near another; and a family conſiſts of a male, female, ſome half grown, and one ſmall calf: hence it appears that every male has one female. They bring forth their young in the harveſt, and never more than one at a time.

They appear to be extremely gluttonous, eating ſo continually without any regard to their own ſafety, that they hardly ever lift their heads above the water; ſo that any one may go among them in boats, and chuſe which he pleaſes to carry off. The half of their body, that is their back and ſides, is always above water, upon which flocks of crows ſettle, and pick the lice out of their ſkins. They do not feed upon every herb, but, firſt, upon ſea cabbage [*], which has a leaf reſembling ſavoys; ſecondly, upon cabbage [†] reſembling a club; thirdly, upon cabbage [||] reſembling thongs; and, fourthly, upon a waved kind of cabbage [‡]: and wherever they have been, though but for one day, heaps of roots and ſtalks are thrown out upon the ſhore.

[*] Fucus Coiſpus braſſicæ ſabaudicæ folio cancellatus.

[†] Focus clavæ facie.

[||] Fucus ſcuticæ antiquæ Romane facie.

[‡] Focus longiſſimus ad nervum undulatus.

136 When they have eaten their fill, they lie aſleep upon their backs.
As ſoon as the ebb begins they retire to the ſea, fearing to be left
upon the ſhore. In the winter time they are frequently cruſhed
by the ice againſt the rocks, and thrown out upon the beach.
This happens during a ſtorm, when the wind is upon the
ſhore. At this ſeaſon they are ſo lean that one may count all
225 their ribs and vertebræ. They are caught with great iron hooks,
136 ſomething ~~like the~~ fluke of a ſmall anchor. This hook is carried
by a ſtrong man in a boat with three or four rowers, who
when he comes among the herd ſtrikes into one of them.
Thirty men that are left upon the ſhore, and hold one
end of a rope which is faſtened to the hook, draw the
manati towards the land; and in the mean time thoſe
that are in the boat ſtab and cut it 'till it dies. I once
ſaw ſome of the fiſhers cut off the fleſh from the creature,
while it was alive, who all the while ſtruck the water with its
paws with ſuch force that the ſkin was torn off them; but at
laſt it expired. It is eaſier to catch the old ones than the
young: for the laſt are more active, and the ſkin being ſofter
the hook frequently looſes its hold. When one of them is
ſtruck, and ſtruggles to clear himſelf of the hook, thoſe of the
herd that are neareſt to him come to his aſſiſtance: ſome
overturn the boat by getting under it; others lay themſelves
upon the rope, as if they could break it; and others endeavour
to ſtrike out the hook with their tails, which ſometimes
136 ſucceeds. The love that is between the male and female is
extraordinary; for after the male has uſed all methods to aſſiſt
and reſcue the female, he follows her even dead to the very
ſhore, and has been obſerved ſometimes even after two or
three days to remain by the dead body. This animal cannot
be ſaid to low, but rather brays hard, which is particularly obſervable
when it is wounded. It cannot be ſaid how ſharp

their ſight or hearing is; but both ſenſes appear to be very weak, perhaps from their keeping their heads always under water.

There is ſuch a plenty of manati in *Bering*'s iſland, that it is ſufficient to maintain all the people of *Kamtſchatka*. Their fleſh, though it takes a long time to boil, taſtes well, and is ſomething like beef. The fat of the young reſembles pork, and the lean is like veal. This fleſh is eaſily boiled, and ſwells ſo much that it takes up double the ſpace when boiled that it did raw. It is impoſſible to boil the fat about the head and tail; but the ribs and back are very delicate. Some pretend that the fleſh of this animal will not keep in ſalt; but we found the contrary, it appearing to us little inferior to ſalted beef*.

Beſides

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* That the *Kamtſchatka* manati is the ſame kind of animal with that found by Captain *Dampier* in the rivers of *South America* and at the *Philippine Iſlands*, is evident from that author's deſcription of it:

'This creature is about the bigneſs of a horſe, and 10 or 12 feet long. The mouth of it is much like the mouth of a cow, having great thick lips. The eyes are no bigger than a ſmall pea, the ears are only two ſmall holes on each ſide of the head. The neck is ſhort and thick, bigger than the head. The biggeſt part of this creature is at the ſhoulders, where it hath two large fins, one on each ſide of its belly. Under each of theſe fins the female hath a ſmall dug to ſuckle her young. From the ſhoulders towards the tail it retains its bigneſs for about a foot, then it groweth ſmaller and ſmaller to the very tail, which is flat, and about 14 inches broad, and 20 inches long, and in the middle four or five inches thick, but about the edges of it not above two inches thick. From the head to the tail it is round and ſmooth, without any fin but thoſe two before mentioned. I have heard that ſome have weighed above 1200lb. but I never ſaw any ſo large. The manati delights to live in a brackiſh water; and they are commonly in creeks or rivers near the ſea. 'Tis for this reaſon, poſſibly, they are not ſeen in the South Seas, (that ever I could obſerve) where the coaſt is generally a bold ſhore, that is, high land deep water cloſe home by it, with a high ſea or great ſurges; except in the bay of *Panama*, yet even there is no manati: whereas the *Weſt Indies*, being as it were one great bay compoſed of many ſmaller, are moſtly low land and ſhoal water, and afford proper paſture (as I may

Beſides the above-mentioned animals, Mr. *Steller* ſaw upon the coaſt of *America* a new and uncommon ſea beaſt, which he thus deſcribes: Its length is about five feet; its head like a dog's; its ears ſharp, and ſtanding up; and its eyes large; upon its upper and under lips it has hairs like a beard; its make is thick and round; thicker towards the head, thin and ſmall towards the tail; the whole body is covered with thick hair, grey upon the back, and red or ſorrel towards the belly; the tail fin divides itſelf into two, the uppermoſt of which is longeſt. The author was extremely ſurpriſed that he could not diſcover any feet or paws, as in other ſea animals. Its appearance in general was ſomething like the draught of that creature, which *Geſner* gives under the name of ſea monkey; and the author thinks that the name of monkey is not improperly applied to this animal for its remarkable activity and many tricks. It ſometimes ſwam after their veſſel for two hours, looking firſt at

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'may ſay) for the manati. Sometimes we find them in ſalt water, ſometimes in freſh, but never far at ſea; and thoſe that live in the ſea at ſuch places where there is no river nor creek fit for them to enter, yet do commonly come once or twice in 24 hours to the mouth of any freſh-water river that is near their place of abode. They live on graſs ſeven or eight inches long, and of a narrow blade, which grows in the ſea in many places, eſpecially among iſlands near the main. This graſs groweth likewiſe in creeks, or in great rivers, near the ſides of them, in ſuch places where there is but little tide or current. They never come aſhore, nor into ſhallower water than where they can ſwim. Their fleſh is white, both the fat and the lean, and extraordinary ſweet and wholeſome meat. The tail of a young cow is much eſteemed; but if old, both head and tail are very tough. A calf that ſucks is the moſt delicate meat: privateers commonly roaſt them; as they do alſo great pieces out of the bellies of the old ones.

'The ſkin of the manati is of great uſe to privateers; for they cut them into ſtraps, which they make faſt on the ſide of their canoes, through which they put their oars in rowing inſtead of tholes or pegs. The ſkin of the bull, or of the back of the cow, is too thick for this uſe; but of it they make horſe-whips, cutting them two or three feet long: at the handle they leave the full ſubſtance of the ſkin, and from thence cut it away tapering, but very even, and ſquare all the four ſides. While the thongs are green they twiſt them, and hang them to dry, which in a week's time become as hard as wood.'

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one thing and then at another with an appearance of ſurprize; and would come ſo near the ſhip, that he might be touched with a pole; but would retire to a greater diſtance on obſerving any on board to ſtir. He frequently raiſed one third of his body above the water, ſtanding erect like a man, ſometimes for half an hour together; and then darting under the veſſel, appeared in the ſame poſture on the other ſide; and this he would repeat, perhaps thirty times together. At other times he would bring a great *American* ſea herb, which is flat and hollow below like the bottom of a bottle, and ſomething ſharp above: this he would toſs about and catch again with his mouth, playing a thouſand apiſh tricks with it. It has been obſerved of all ſea beaſts, that the more they play in fair weather the greater ſtorm is to be expected.

CHAP. IX.

Of FISHES.

THERE are great numbers of whales both in this ocean and in the *Penſchinſka* ſea; they frequently ſwim within muſket-ſhot of the ſhore, and ſometimes will come cloſe to the very ſhore, perhaps to rub off the ſhell-fiſh that adhere to their bodies and give them no reſt; as plainly appears from their lying a long time with their backs above water, to allow the rooks and gulls to pick them off. At ſuch time as the fiſh come out of the ſea into the freſh waters, two or three whales are often found together at the time of flood near the mouth of the rivers.

136 The whales here are from ſeven to fifteen fathoms long. We can give no account of the different ſpecies of whales at *Kamtſchatka*, few of them being caught here except in the northern parts by the *Koreki* and *Tchukotſkoi*, who feed upon their fleſh. In the year 1740 a whale was brought by the flood into the mouth of the *Bolſkoi* river; but ſome Coſſacks obſerving it, went out in boats, and cut it all to pieces; ſo that next day when I came, to my great diſappointment, I neither found fleſh nor bones; for theſe people, who had cut off the fleſh, being afraid of puniſhment for doing it without permiſſion, had buried the bones to conceal their crime. *Steller* obſerved that more whales were thrown on the eaſtern than on the weſtern ſhore, and more in the harveſt than in the ſpring.

225 171 The different people have different ways of catching them: the *Kuriles* by throwing their poiſoned darts into them: the *Olutores* catch them in nets, made of thongs of the ſea horſe ſkin as broad as a man's hand, which they dry in the ſmoke. Theſe they ſet in the mouths of the rivers, and the whale purſuing other fiſh entangles himſelf in them. With theſe thongs he is dragged to the ſhore by the help of numbers who aſſemble on theſe occaſions, and always perform certain ceremonies. They bring out of their common huts a wooden whale about two feet long; then building a new hut they place this image in it, uſing ſeveral conjurations. After this they light a lamp, and appointing ſome people to look after it, give orders that it be not allowed to go out from ſpring to harveſt, which is as long as the fiſhing ſeaſon laſts. They then cut the whale into different portions, which, looking upon it as their moſt delicate proviſion, they prepare in the following manner:---They dry the lean in the ſun; and the ſkin, which they ſeparate from the fat, they beat with hammers, and of it make ſoles to their ſhoes, which wears extremely well. They ſmoke the fat parts,

and cleaning the guts, they fill them with the oil which 171
runs in cutting the fiſh, or which they melt from the blubber, 225
having no other veſſels to keep it in.

The *Tchukotſkoi* kill whales with a harpoon in the ſame manner as the *Europeans* do, and they catch ſo many that they never eat thoſe whales that are thrown dead on ſhore, as ſome of the neighbouring people do, but only extract their fat for burning. Although the *Tchukotſkoi* have large herds of deer, which might be ſufficient for their ſuſtenance, yet they are the greateſt whale fiſhers of any people in this part of the globe, and look upon the fat of the whales as the greateſt delicacy; beſides, having great ſcarcity of wood, they uſe it for burning. They make themſelves ſhirts of the inteſtines of the whales, like the *Americans*; and uſe them for veſſels, like the *Olutores*.

The kaſatki, (falſely called the ſword-fiſh) which are nu- 136
merous in theſe ſeas, are very uſeful to the inhabitants, for theſe 825
fiſh frequently either kill or drive the whales on ſhore. *Steller* had an opportunity of ſeeing an engagement between the kaſatki and whale, both at ſea and upon *Bering*'s iſland. When the kaſatki attacks the whale he makes him roar ſo that he may be heard ſome miles. If the whale makes off, the kaſatki follows him at ſome diſtance 'till great numbers of them gather together, and make a general attack. It is never obſerved that ſuch whales as are thrown on ſhore have any part eaten out of their bodies; ſo that this war between the whales and the kaſatki muſt proceed only from a natural enmity. The fiſhers are ſo much afraid of theſe animals that they not only never throw any darts at them, but if poſſible avoid going near them; nay, they even make offerings to them, begging that they will not hurt them: for if irritated they ſometimes overturn their boats.

225 Mr. *Steller* writes that he was certainly informed, that in the bodies of whales thrown upon the coaſt of *Kamtſchatka*, there have been found harpoons marked with *Latin* letters; but by what means he could be certain of this, I know not; for the natives have no idea of letters; and before our arrival, none of our Coſſacks ever ſaw a *Latin* letter.

237 262 Many are the advantages which the *Kamtſchadales* derive from this plenty of whales: of the ſkin they make ſhoe ſoles and ſtraps; they eat the fleſh, as likewiſe the fat which they alſo burn; they ſew their boats with the beard, of which alſo they make nets for foxes and fiſh; out of the lower jaw they form a ſort of ſledge, and make knife-handles, rings, and ſeveral ſmall things of it beſides; the inteſtines ſerve for barrels, and other veſſels; out of the nerves and blood-veſſels they make ropes; and of the vertebræ, ſeats. The moſt delicate pieces of the whale are the tongue and fins. I thought that the whale's fat with grout was not unpleaſant, but I can't ſay, that I was then a proper judge, for hunger makes every thing agreeable.

226 136 825 They never go a fiſhing for the kaſatki, but if this fiſh is thrown on ſhore they uſe its fat like that of the whale. Mr. *Steller* ſays, that, in the year 1742, eight of them were thrown on ſhore at once, near the *Lopatka*; but the diſtance and the bad weather prevented his going to examine them. He was told, that the largeſt never exceed four fathoms in length; that they have ſmall eyes, a wide mouth, and great ſharp teeth, with which they wound the whale; but that they tear up the belly of the whale with a ſharp fin which is upon their backs, is a falſe report; for though this fin is about five feet long, very ſharp, and in the ſea ſtands quite upright, yet it is altogether ſoft, and conſiſts only of fat: nay the animal itſelf is almoſt all fat having hardly any muſcular fleſh.

There is likewiſe another creature in theſe ſeas reſembling a /136
whale, but ſmaller and ſlenderer: the *Ruſſians* call it a wolf, and 278
the *Kamtſchadales*, chethak. Its fat is of ſuch a nature, that, 262
when ſwallowed, it preſently paſſes inſenſibly. The natives 522
ſometimes uſe it as a medicine in caſe of coſtiveneſs, but oftener to play tricks with one another. They feed upon the fleſh and tongue, which have not the ſame quality.

Notwithſtanding the great plenty of whales upon this coaſt, the 262
ſcarcity of food is ſometimes ſo great, that whole villages die of 755
hunger. In the month of *April*, 1739, I ſaw a melancholy inſtance 278
of their being obliged, out of neceſſity, to eat ſome poiſonous whale's fat, at a village upon the river *Beroſover*, called *Alaune*, where I obſerved the people all look pale, as if they had been ſick for a long time; when I aſked the reaſon, I was told, that juſt before my arrival one of the natives was killed by eating of whale's fat; and as all the reſt had eat of the ſame, they dreaded the ſame fate. In about half an hour, a young healthy man began to groan and complain that his throat burnt; upon which the old women, who are the phyſicians there, faſtened him with ropes to a ladder, and placed themſelves on both ſides of him with great clubs in their hands, with which they toſſed firebrands out of the huts, and the wife of the ſick perſon coming behind him, made ſeveral conjurations over his head, begging death to ſpare him: however he died the next day; but the other inhabitants, as I heard, recovered with difficulty after a long time. This accident did not greatly ſurpriſe me; I rather wondered that ſuch things did not happen oftener, eſpecially from thoſe whales which are killed with poiſoned darts. However the *Kamtſchadales* think ſo little of the conſequences, that they had rather riſk their lives than be deprived of the pleaſure of eating whale's fat.

After the whales, we muſt mention the fiſh * mokoe, which 136
at *Archangel* is called akula. It is about three fathoms long;

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* Canis Carcharias Autoris.

brings

136 brings forth its young alive, like the whale; and when its mouth is ſhut has ſome reſemblance of a ſturgeon, but its teeth are very different, being large and terrible. The *Kamtſchadales* 262 eat the fleſh of this fiſh,[1] and though it appears to 825 be tough and ſtrong, they ſay it is exceedingly well taſted. The guts, and particularly the bladder, are in high eſteem; ſo that when they catch this fiſh, they never call it by its name, for fear, as they imagine, they ſhould provoke it to burſt its bladder, and render it uſeleſs to them. The teeth are ſold under the name of ſerpents' teeth.

136 Several fiſhes which are common to other ſeas are found here; 262 as pike, eels, lampreys, cod, and very fine ſoals in great plenty; 231 but the inhabitants make no account of theſe fiſh, and never uſe them unleſs in great neceſſity, or to feed their dogs. Mr. *Steller* obſerved four different ſpecies of flat fiſh.

There is a fiſh called * vahnae, which is a ſpecies of the cod; is round and thick, with three fins upon its back; and when taken out of the water is of a copper-colour, but preſently changes to yellow: its fleſh is white, but ſoft, and of a diſagreeable taſte; however the inhabitants eat more of it, than of other fiſh which are much better taſted; the reaſon indeed is, that they catch this fiſh in the beginning of the ſpring, when they can catch no other; a great deal of which they dry in the ſun uncleaned, deſigning it as proviſion for their dogs.

136 I ſaw the fiſh which they call † terpuk, but it being dry, I could not obſerve thoſe fine colours which Mr. *Steller* deſcribes. By his deſcription its back is blackiſh, its ſides are reddiſh, and chequered with fine ſilver-coloured ſpots; ſome of which are ſquare, and others circular: in its ſhape it reſembles the perch.

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1. [mokoe or Canis Carcharius Autorus]

* Onos vel Aſinus Antiquorum.

† Doecogrammos Stelleri.

They angle for this fiſh near the *Kurilſki* iſlands, and the haven 136
of *Awatſcha*, with hooks made of bone or wood.

There are likewiſe ſeveral other kinds of fiſhes in theſe ſeas 136
which are not very common in other places; but as they make 262
no part of their nouriſhment, and are ſeldom caught, I ſhall
take no notice of them, my deſign being only to mention ſuch 237
as ſerve for food to the inhabitants, in this country which produces no grain. The chief of theſe are ſalmon of different kinds, which during the ſummer come in ſhoals from the ſea up the rivers. Of theſe they make what they call *eukol*, which they uſe inſtead of bread; and they boil up the fat, which ſerves for butter. They likewiſe make glue of them.

Before I give a particular deſcription of each ſpecies apart, 136
I would communicate ſome obſervations which regard the catching of theſe fiſh, and which indeed are wonderful proofs of the Divine Providence and the goodneſs of the Creator, who has bleſt a place with ſuch abundance of fiſh where there is neither cattle nor grain.

In *Kamtſchatka* the fiſh come from the ſea in ſuch numbers, that they ſtop the courſe of the rivers, and cauſe them to overflow the banks; and when the waters fall there remains a ſurpriſing quantity of dead fiſh upon the ſhore, which produces an intolerable ſtink. At this time the bears and dogs catch more fiſh with their paws than people do at other places with their nets. All the fiſh that ſwim up the rivers are of the ſalmon kind, and are commonly called red fiſh; but the ſeveral ſorts are ſo diſtinct from each other, that *Kamtſchatka* alone is thought to produce as many different ſpecies as are to be found in all the world beſides. Not one fiſh remains in *Kamtſchatka* longer than ſix months (except gudgeons); for all that are not caught before the end of *December* die, except in ſome few deep places where there are warm ſprings. It is obſerved of all the different ſpecies

136 of ſalmon in *Kamtſchatka*, that they are brought forth and die in the ſame river, come to their full growth in the ſea, and ſpawn only once during their whole lives: for which purpoſe they ſwim up the rivers, and having found a proper place in ſmooth water, they make a hole with the fins that are under their gills, and there depoſit their roes.

In *Siberia* the red fiſh live in clayey rivers; they remain there ſeveral years, and generate every year, having numbers of inſects proper for nouriſhment. They winter in deep pools, and in the ſpring ſwim further up for the ſake of propagating in the mouths of little rivulets that fall into the great rivers, where they are commonly caught. The young fry ſwim down to the ſea, where they continue 'till they come to their full growth, which Mr. *Steller* thinks is in the third year; and then they return in order to propagate. It is remarkable that thoſe fiſh which are bred in a great river continue in the ſea near to its mouth, feed upon things brought down by the ſtream, and when the time of ſpawning approaches they will enter no river but that which produced them. It is alſo very extraordinary, that thoſe fiſh which come up the rivers in the month of *Auguſt*, though they have time enough to ſpawn, yet as there remains but little time for their young to return, take a year-old fiſh of their own kind, which continually follows the male and female; and when the old have covered the roes they continue to aſcend, the young one, which is no bigger than a herring, guarding them 'till the month of *November*, at which time it returns with the other fiſhes. It is very probable that the ſame thing happens in *Europe*, which may have given occaſion, through the difference of their ages, to account them of different ſpecies.

Each kind of fiſh always aſcends the rivers at the ſame time. In the month of *Auguſt* ſometimes two, three, nay even four ſpecies come up at once; but each keeps ſeparate from the other.

The different ſpecies of thoſe fiſhes which are here called red fiſh 136
ſhall be mentioned in giving an account of the time when they 825
come out of the ſea into the rivers; it being remarked that they 805
always obſerve the ſame order, the ſame ſpecies which comes
out firſt one year continuing to do ſo the following. This the
Kamtſchadales find to be ſo certain, that they call their months
by the name of the fiſh which are then caught.

The largeſt and beſt of theſe fiſh, and which come firſt out of 136
the ſea, are called chavitſi. It reſembles the common ſalmon,
though it is a great deal broader; is about three feet and a half
long, and weighs a pood and a half; its breadth is about the
fourth part of its length; its noſe is ſharp, the upper jaw being
longer than the lower; its tail is equal; the back is bluiſh, with
ſome ſmall black ſpots; its ſides are of a ſilver colour, and its
belly white; its gills are long and ſmall; and its fleſh is red
both raw and boiled.

They ſwim up the rivers with ſuch force that the water ſeems 136
to riſe like a wall before them; which the *Kamtſchadales* obſerv- 226
ing get into their boats, and throw out their nets. This fiſh does 262
not come up in ſuch large ſhoals as the others, nor is ſuch plenty
caught as to make *eukol* of it, except upon the river *Kamtſchatka*;
and even there it is ſo rare that it is only uſed on feaſts or
holydays, and after all it is ſo fat that it preſently turns bitter.
The Coſſacks, for the moſt part, ſalt it, particularly the belly,
back, and head. The ribs are dry and hard, but the belly is
truly a delicate food, at leaſt no fiſh there comes up to it; and
what they dry in the ſun, if not better than the *Jakutſki*
ſturgeon, is at leaſt not worſe.

Of all the rivers that run into the Eaſtern Ocean this fiſh 136
is only found in the river *Kamtſchatka* and the bay of
Awatſcha; and of thoſe that fall into the *Penſchinſka* ſea, only in
the *Bolſcheretſkoi* river: beſides, Mr. *Steller* ſays, that none is to be
found further north than 54°, and it is certain that it is not

136 to be found near *Ochotſka*, where it is eſteemed a valuable preſent.

226 262 576 574 The nets with which this fiſh[1] is caught are made of yarn about the thickneſs of ſugar ropes; and the fiſhing begins about the middle of *May*, and laſts ſix weeks. The *Kamtſchadales* eſteem this fiſh ſo much, that the firſt they catch they bake and eat with great rejoicings. This cuſtom is very diſagreeable to the *Ruſſian* inhabitants who hire the natives to fiſh for them; for however impatient the maſter may be to taſte the new fiſh, the fiſhermen will have the firſt, looking upon it as a great ſin if they do not eat it themſelves, and with all due ceremonies.

136 The ſecond kind is only called red fiſh, in *Ochotſka*, narka. It is about 21 inches long, and flattiſh; its fleſh is extremely red; its head very ſmall; the ſnout ſhort and ſharp; the tongue bluiſh, with whitiſh ſides; its back bluiſh, with black ſpots; its belly white; and its tail forked. Its breadth is about a fifth part of its length; and it has ſcales large and round, eaſily ſeparating from the ſkin: it weighs about fifteen pounds. It is found in every river that runs either into the *Penſchinſka* or Eaſtern Sea, coming up in great ſhoals; and it is caught about 136 the middle of *June*. The *eukol* that is made of it, though very 226 pleaſant, preſently turns bitter; ſo that for the moſt part they either ſalt this fiſh, or boil it for its fat. There are two things worth notice concerning it: the firſt of which is, that part go before to the heads of the rivers, as if they were ſent out to examine them, where ſome of them are caught before the ſhoals appear at the mouths. The ſecond is, that this fiſh is [illegible] plenty in ſuch rivers as run out of lakes than others: nor does it live long in the former, but haſtens directly into the latter, in the depths of which it lies 'till the beginning of *Auguſt*, at which time it comes nearer the ſhore, and tries to get into theſe rivers that communicate with the lakes. Here the inhabitants catch them by nets, dams, or other methods.

The

1.[chivatsi]

The third kind of this fiſh is called keta or kaeko; which is 136
ſomewhat larger than the narka. The fleſh is white; the head 262
flattiſh and longiſh; the ſnout is bent; the teeth, when it has
been ſome time in the river, are like a dog's; its tongue is ſharp;
its tail a little forked; its back black and green; its ſides and
belly like other fiſh; and its ſkin is without ſpots. The *eukol*
that is made of this fiſh they call their houſehold bread, being
much more plenty than any other; as the ſeaſon of the fiſhery,
which begins in *July* and ends about the middle of *October*, is
drier and more proper for preparing it. This fiſh is caught in
all the rivers both in the *Penſchinſka* and Eaſtern ſeas.

The gorbuſhe, or crook back, follows or ſometimes accompanies 136
the keta. This fiſh is more plentiful than any other whatever; 262
it is about eighteen inches long, and flattiſh; its fleſh is white; 231
its head ſmall; its ſnout ſharp, and conſiderably crooked; its teeth
ſmall; its back bluiſh, with round black ſpots; its ſides and belly
like the other ſorts; and the tail forked. Though this fiſh is
not bad, yet the inhabitants have ſuch plenty of what they eſteem
better, that they uſe this only for their dogs.

The laſt of theſe kinds that come on ſhore is called white fiſh. 136
This fiſh both in bulk and appearance is very like the keta; they 825
differ in this indeed, that the keta has no ſpots, and the white 226
fiſh has long black ſpots upon its back. It excels in taſte all the
fiſhes that have white fleſh; and it agrees with the narka in this,
that it moſt frequently haunts thoſe rivers that run out of the
lakes, and is caught there in the ſame manner. The young ones,
which accompany the old to take care of the roes and convoy the
young fry down, are eſteemed by the inhabitants to be a different
ſpecies, and are called milktchuch. So ſoon as the old ones have
ſpawned, they take all care to provide for their own ſafety, re- 136
tiring immediately to deep places where there are warm ſprings; 226
and they are chiefly found in the ſprings near the *Bolſcheretſkoi* river

136 and the *Opalſkoy* lake: they are caught likewiſe during the whole
226 winter in thoſe ſprings that run into the *Kamtſchatka* from the
ſouth, and near to where the old lower fort of *Kamtſchatka*
ſtood they alſo abound, which is a great relief to the inhabitants.
I myſelf was at this fiſhery in the end of *February*; however I
found the fiſh at that time dryer and not ſo well taſted as in the
harveſt. This fiſh eats very well, either ſalted, dryed, or
ſmoaked. It is caught frequently in the ſame net with the keta
227 and narka; and thoſe which they uſe for this fiſhery are made
of yarn about half as thick as that with which they make the
nets for the chavitſi, and the meſhes are about an inch and
a half wide.

136 All theſe different ſpecies of fiſh change their colours, turn lean and ugly, their ſnout bends, their teeth grow, and a ſcurf appears upon their ſkins. The chavitſi, narka, and white fiſh, change their ſilver colour to a red; the keta turns likewiſe red, ſtained with black ſtripes. Their fins and tails become reddiſh and blackiſh; in one word, they would never be taken for the ſame fiſh that enter the rivers, if theſe changes were not certain. The gorbuſhe alone preſerves its ſilver colour, and, whenever it loſes that, it dies.

It is incredible with what eargerneſs they go up the rivers, particularly the gorbuſhe. When they come to any place where the ſtream is ſtrong, and thoſe that are weak find it impoſſible by their own ſtrength to get up, they faſten their teeth upon the tail of ſome that are ſtronger, that they may be drawn up by them; ſo that ſeveral of theſe fiſh are found which have their tails bitten.

The true ſalmon may always be reckoned one of thoſe fiſh that come in ſhoals; and are found to go up the rivers *Kompakſve*, *Bircumkin*, and *Etchi*. I never ſaw theſe fiſh indeed, but have heard a great deal of them. Mr. *Steller* writes, that when

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when they return to the ſea, it ſometimes happens that they are driven by a ſtorm from the mouth of their native river, ſo that loſing their way, the following year they aſcend a ſtrange river, which is the occaſion of their being found in more plenty in ſome rivers one year than another.

There are other kinds of red fiſh which come up the river without any order, and live there the whole winter before they return. Mr. *Steller* ſays, they ſtay ſometimes four or five years. The firſt of this ſpecies is called, at *Ochotſka*, malma, and at *Kamtſchatka*, goltſa. When they come out of the ſea their colour is clear like ſilver; the upper part of the ſnout is blunt, and ſomewhat bent; the lower ſharp, and bent towards the upper. When they are ripped up, and the roes taken out, there appear upon the ſides round red ſpots of different magnitudes, the belly and lower fins become likewiſe reddiſh, except the bones which continue white.

The largeſt fiſh of this ſpecies, which lives ſometimes five or ſix years, comes from the ſea into the river *Kamtſchatka*, out of which it goes into the rivers that run into it, and by them to the lakes, where it grows almoſt as big as the chavitſi, though it ſeldom weighs more than twenty pounds. They are found likewiſe very large in the *Biſtroy* river; there their length is commonly twenty-eight inches, and breadth ten; they are of a dark colour, have large teeth, and the lower jaw is crooked with a knob: it ſeems indeed of a different ſpecies. Theſe of three years old, which have been one year out of the ſea, have a long head, are of a ſilver colour, with ſmall ſcales, and ſmall red ſpots; and ſuch as have been two years out of the ſea are round and longiſh, with ſmall heads, and their fleſh, which is of a reddiſh white, is hard and well taſted. With regard to their ſize; the firſt year they are long and ſmall; the ſecond, they grow more in breadth than in length; the third, the head grows conſiderably; and the fourth, fifth, and ſixth years, their breadth and thickneſs increaſes

greatly

136 226 251 greatly: this obſervation probably holds in all kinds of ſalmon trouts. In the fourth year alſo, the lower part to the ſnout becomes hooked. This ſpecies of fiſh[1] ſwims along with the gorbuſhe, and is caught with it in the ſame net, which is wove of ſmall yarn, the meſhes being about an inch wide. Such as live in the rivers are nouriſhed by the roes of other fiſh; and in the ſummer are found near the heads of ſmall rivers, which they leave in the ſpring. Such as are caught at the beginning of ſummer are ſalted, but thoſe caught later are frozen for the winter.

136 Another ſpecies of fiſh is called muikiſi, and is about the bigneſs of the narka; its ſcales are pretty large; its head is of a middling ſize; the upper part of its ſnout is like that of the goltſa, with the lower part hooked; it has teeth in its jaws and on the ſide of the tongue; its back is blackiſh, marked with round, or ſemicircular black ſpots; and upon each ſide has a large red ſtripe, which goes quite from the head to the tail: this diſtinguiſhes it from all the other ſpecies of this fiſh: it ſwallows all kinds of naſtineſs, and often catches the field mice that happen to ſwim upon the river; and is ſo particularly fond of the nortleberry, that if it ſees any growing upon the bank, it throws itſelf out, and ſeizes either the berry or the leaf of the plant. It is a well taſted fiſh, but is not caught in ſuch plenty as others are. They do not certainly know the time of its entering the rivers, but imagine it is before the ice is gone.

There is a third kind called kunſha, which is about three feet long; the head makes a ſeventh part of the length; the ſnout is ſhort and ſharp; its jaws are furniſhed with teeth; its back and ſides blackiſh, marked with yellow ſpots, ſome of which are round and others oblong; its belly is white; its lower fins and tail blue; and the fleſh white and well taſted. In *Ochotſka* it ſwims in ſhoals, but at *Kamtſchatka* it is more rare, and conſequently more eſteemed.

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[1] [Goltza]

The fourth ſpecies is the harius, which is well known in 136
Siberia and all *Ruſſia*; but thoſe that are here have the back
fin longer than the others. Mr. *Steller* writes, that they come
up into the rivers upon the firſt going off of the ice; but I never
happened to ſee this fiſh in *Kamtſchatka*.

There is another ſpecies of red fiſh which reſembles the golſta, with this difference, that its head is larger, and the upper part of the ſnout a little hooked; its ſides are marked with red ſpots, like the malma: it is ſeldom longer than 20 inches.

Among the ſmall fiſhes which the *Kamtſchadales* feed upon 136
are three ſpecies of ſmelts; one of which is called hagatch, the 231
ſecond innaka, and the third uiki. The hagatch is our common 262
ſmelt. The innaka differs from it a little, and is found in great
plenty about the lake *Nerpech*. Uiki is thrown ſometimes upon
the ſhore in vaſt heaps for 100 verſts together. They are
eaſily diſtinguiſhed from the other ſpecies by a rough ſtripe that
goes down the ſide. They commonly ſwim three together,
and are ſo joined by the afore-mentioned rough ſtripe, that when
you catch one the others cannot eaſily diſengage themſelves.
The *Kamtſchadales* dry this fiſh as food for their dogs; but in
caſe of ſcarcity they uſe it themſelves, although the taſte is very
diſagreeable

The laſt kind of fiſh which we ſhall mention is the herring: 136
theſe are found in great plenty in the Eaſtern Sea, but very ſel- 226
dom in the bays which lie upon the *Penſchinſka*. In my opinion
they don't differ in the leaſt from the herring which we have in
Europe; which Mr. *Steller* likewiſe confirms. In the harveſt
they are found in large lakes, where they breed and winter: in
the ſpring they ſwim towards the ſea. The greateſt fiſhery of
them is in the lake *Viliutchin*, which is only about fifty fathom
from the ſea, and has communication with it by a ſmall outlet.
When theſe herrings enter the lake, this paſſage is ſhut up by
the ſand being thrown into it, and remains ſo 'till the month of

March,

136 *March*, when it is waſhed away again by the high water ariſing
226 from the melting of the ſnow; which happens regularly every year.
The herrings come every day to the mouth of the outlet, as if
to inform themſelves whether the paſſage was yet open, and remain
there from morning 'till evening, when they return to the
deeper part of the lake. The *Kamtſchadales* obſerving this, break
holes in the ice near the mouth of the outlet, where they put
down their nets, and catch great quantities. This fiſhery continues
ſo long as the ice remains upon the lake. They catch them
likewiſe with nets in the ſummer, at the mouths of the rivers;
262 when they boil out the fat, which is as white as butter, and more
438 delicate than that of any other fiſh; and ſend it from the lower
Kamtſchatkoy fort (where the greateſt quantity is made) as a rare
preſent, to the other forts.

CHAP. X.

Of the BIRDS.

136 *KAMTSCHATKA* abounds in birds, but the inhabitants
223 make leſs uſe of them than of roots and fiſhes:
433 the reaſon of this is, that they don't well know how to
catch them; and their fiſhery is ſo advantageous to them, that
to leave that and go a bird-catching would be as ridiculous
as for the huſbandman to leave his plough and go a
ſhooting.

136 I ſhall here divide the birds into three claſſes: the firſt, ſea
fowls; the ſecond, the freſh-water fowls; and the third, thoſe
which frequent the woods and fields.

Class I. *Of the* SEA FOWLS.

The ſea fowls are found in greater plenty about the coaſt of the 136
Eaſtern Ocean, than that of the *Penſchinſka* ſea; for the coaſt of
the Eaſtern Ocean is more hilly and convenient for breeding.

The ipatka * is well known to all writers of natural hiſtory by the name of anas arctica, commonly called in *England* puffins. It is found upon the coaſt of *Kamtſchatka*, and the *Kurilſki* iſlands, and even upon the *Penſchinſka* bay, almoſt as far as *Ochotſka*. It is about the bigneſs of, or rather ſmaller than, a common duck; its head and neck are of a bluiſh black; the back is black; the belly and all below white; its bill red, and broad towards the root, but ſomewhat narrower towards the point; upon each ſide are three furrows; its legs are red, its feet webbed, and its nails ſmall, crooked, and
black; its fleſh is hard; its eggs are like hen's eggs; it builds 777
its neſt with graſs on the cliffs of the rocks. The *Kamtſchadales*
and *Kuriles* wear the bills of theſe birds about their necks faſtened 825
to ſtraps; and, according to their ſuperſtition, their ſhamans, or prieſts, muſt put them on with proper ceremony, to procure them good fortune.

Another ſpecies of theſe birds is called meuchagatka †, and 136
in *Ochotſka*, igilma: this only differs from the former in being all black, and having two yellowiſh white tufts upon its head, which lie all along from its ears to its neck like locks of hair. To the beſt of my remembrance this bird has never yet been deſcribed. Mr. *Steller* and I ſent ſome of theſe ſpecies of birds to the Imperial Muſeum. Among thoſe ſent by Mr. *Steller* there was a third kind which is found upon the iſland *Bondena*, in *Angermannia*, and upon the *Caroline* iſlands; and is ſome-

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* Alca roſtri ſulcis quatuor, oculorum regione temporibuſque albis. Linn. F. ſuec. v. 42.

† Alca monochroa ſulcis tribus, cerro duplici utrinque dependente. Anas arctica cirrata. Stell.

136 what leſs than the other two; its colour is like that of the ipatka, except that its bill and legs are black, and that there are two white ſprigs upon its forehead, which reach from the eye to the bill.

The aru *, or kara, belongs to this claſs. It is larger than
a duck; the head, neck, and back are black; the bill long,
ſtrait, black, and ſharp; the legs black with a caſt of red; it
has three black toes, and is web-footed. Great numbers of
237 theſe are found upon the rocky iſlands; and the inhabitants kill
262 them for the ſake of their fleſh, though tough and bad taſted;
but more ſo for their ſkins, of which, as well as thoſe of other
ſea fowls, they make themſelves garments. Their eggs are
reckoned a great delicacy.

136 There are two kinds of tchaiki, or cormorants, found upon
this coaſt, which are hardly obſerved any where elſe. They are
about the bigneſs of a gooſe, have a ſtrait reddiſh bill about five
inches long, and ſharp on the edges, and four noſtrils, ſuch as
other cormorants have, two being near the forehead as are found
in other birds which are thought to prognoſticate ſtorms, and are
thence named Procellaria; their heads are of the middling ſize;
their eyes black; their tails eight inches long; and their legs are
covered with hair to the knees, but below them are bare; they
have three toes of a bluiſh colour, and are web-footed; their
wings extend more than a fathom; they are ſometimes ſpeckled;
they appear often near the ſhore, but can't ſtand ſtrait upon dry
ground, their feet being ſo near the tail that they are not able to
balance their bodies: they fly ſlow even when hungry, but when
full of meat they cannot raiſe themſelves from the ground; and,
having eat too much, they eaſe their ſtomachs by throwing it
237 up; they have a wide throat, and ſwallow fiſh whole; their fleſh
is very tough and ſinewy, therefore the natives ſeldom eat it, but
in great neceſſity, killing them principally for the ſake of their

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* Lomvia Hoieri.

bladders,

237 bladders, which they uſe inſtead of corks to their nets. The
223 way of catching them is ſingular, being angled for as fiſhes are, in the following manner: they faſten a thick iron, or wooden hook to a long rope or ſtrap, baiting the hook with a whole fiſh, the point of which comes out near the back fin, and then throw it into the ſea; this the cormorants obſerving gather about it in flocks, and quarrel among themſelves who ſhall have the prize, until the ſtrongeſt obtains it and ſwallows it; then being drawn on ſhore, they take out the hook and bait by putting their hands into its throat. Sometimes they faſten a live cormorant, which they call a decoy, to the rope, and that it may not ſwallow the bait, tie down its bill with a cord: the others ſeeing the decoy ſwim ſo near the ſhore, come with greater ſecurity to the bait. The *Kamtſchadales* make needle caſes, and combs to comb their nettles, of the bones of their wings.

136 Beſides the above-mentioned tchaiki, or cormorants, there is another ſpecies which haunt the rivers: theſe are called robbers, becauſe they take the prey from the ſmall birds; their tail is forked like that of the ſwallow.

136 The procellaria, or ſtorm birds, are about the bigneſs of a
787 ſwallow; their feathers are all black, except the tops of their wings, which are white; their bill and legs black. They haunt about the iſlands, and before a ſtorm they fly low and ſkim the ſea, and ſometimes into the ſhips, which the ſailors look upon as the ſign of an approaching violent gale.

136 The ſtariki *, or glupiſha, belong to this ſpecies. The ſtariki are about the bigneſs of a pigeon; have bluiſh bills, and bluiſh black feathers about the noſtrils, which look like briſtles; the feathers of the head are of the ſame colour, interſperſed here and there with white ones, which are longer and thinner than the reſt; the upper part of the neck is black, but the lower black and

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* Mergus marinus niger ventre albo, plumis anguſtis albis auritus. Stell.

136 white ſpeckled. The belly is white, the wings ſhort, the large feathers
of which are black, and the reſt blue; the ſides and tail are black;
the feet are red and webbed; and the nails black and ſmall: it
223 haunts about rocky iſlands, where it likewiſe builds its neſt: The
Kamtſchadales catch theſe fowls eaſier than they do the tchaiki,
or cormorants: they put on a fur-coat of a particular make, and
letting their hands fall down, ſit down in a proper place, and
wait for the evening; when the birds returning from the ſea ſeek
to retire into holes for the night, and in the dark ſeveral of them
fly into their furs, and are caught.

136 Among the birds deſcribed by Mr. *Steller* are the black ſtarikis *, whoſe bills are as red as vermillion, the right ſide of which is crooked; it has a white tuft upon its head. He ſaw a third ſpecies in *America*, which was ſpotted black and white.

The glupiſha are about the largeneſs of the common river cormorants; and are found upon the rocky iſlands, in high ſteep
places; their colours are grey, white, and black; and are perhaps called glupiſha, that is, fooliſh, becauſe they frequently fly
237 into the boats. Mr. *Steller* ſays, that numbers of them are caught
223 in the fourth and fifth *Kurilſki* iſlands, which the inhabitants dry in
the ſun; they ſqueeze the fat through the ſkin, which paſſes very
136 eaſily, and uſe it for burning. He likewiſe writes that all the
rocky iſlands in the ſea between *Kamtſchatka* and *America* are
covered with them. He has ſeen ſome as large as a gooſe, or an
eagle; their bills are crooked and yellowiſh; their eyes are large
like thoſe of an owl; they are black intermixed with white ſpots
over the whole body. He once ſaw, 200 verſts from land, great
numbers of them feeding upon a dead whale, which ſerved them
alſo to appearance for lodging; and in his paſſage through the
Penſchinſka ſea, he ſaw many of the glupiſha, ſome of which

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* Mergulus marinus alter totus niger criſtatus, roſtro rubro. STELL.

were black, and others white; but none of them came ſo near the 136
veſſel as to be exactly obſerved.

The * kaiover, or kaior, a bird of this ſpecies, is black, with its bill and feet red; builds its neſt, which is very curious, upon high rocks in the ſea, and whiſtles very loud, for which reaſon the Coſſacks call it ivoſhik, or poſt-boy. I never ſaw this bird.

The fowl † urile, of which there is great plenty in *Kamtſchatka*, called, by writers, ſea ravens, is about the bigneſs of a
common gooſe, with a long neck and ſmall head; the feathers
upon the whole body are of a bluiſh black, except upon its thighs,
where they are white and in tufts; there are alſo ſome long white
feathers like hairs, here and there upon its neck; it has a red
membrane or ſkin round the eyes, a ſtrait bill, black above and
reddiſh below; and its feet are black and webbed: when it ſwims
it holds up its head, but flying, it ſtretches it out like a crane;
it flies ſwift, but riſes heavily; and feeds upon fiſh, which it
ſwallows whole: in the night time, theſe fowls ſtand in rows
upon the edges of the cliffs, from which in their ſleep they fre-
quently fall into the water; where they are caught by the ſtone 136
foxes, who watch for them; they breed in the month of *July*; 222
their eggs are green, about the bigneſs of a hen's egg, and 223
being boiled thicken a little, but are ill taſted; however the
Kamtſchadales climb the higheſt rocks in ſearch of them, at the
hazard of their lives. They catch them with nets, and in the
evening with nooſes faſtened to a long pole; and theſe crea- 252
tures are ſo void of apprehenſion, that, though they ſee the 262
next fowl to themſelves taken away, they will ſit ſtill and re-
ceive the nooſe, 'till they are all taken off the cliff; their
fleſh is hard and ſinewy; but the natives prepare it in

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* Columba Groënlandica Batavorum. Stell.

† Corvus aquaticus maximus criſtatus periophtalmiis cinnabarinis, poſtica candidis. Stell.

ſuch.

252 ſuch a manner that, as victuals are there, it is not bad; they 262 roaſt it in holes dug in the earth, without plucking off the feathers, or taking out the entrails, and when roaſted, they ſkin and eat it.

825 The natives ſay that theſe birds[1] have no tongue; but this is not true, for they cry in the mornings and evenings: Mr. *Steller* compares their noiſe to the ſound of a trumpet.

136 CLASS II. *Of thoſe Birds which haunt for the moſt part about the freſh Water.* 223

The firſt of this claſs is the ſwan, which is ſo common in *Kamtſchatka*, both in ſummer and winter, that the pooreſt perſon can have no entertainment without a ſwan. When they are moulting they hunt them with dogs, and kill them with clubs: in the winter they catch them in thoſe rivers that do not freeze.

136 Here are ſeven kinds of geeſe, which are diſtinguiſhed thus: large grey geeſe, gumenniki, ſhort necks, grey and ſpeckled, white necks, ſmall white geeſe, and foreign. They all come here in the month of *May*, and depart in the month of *October*, as Mr. *Steller* ſays; who likewiſe writes, that they come from *America*, and that he himſelf ſaw them paſs *Bering*'s iſland in great flocks, flying eaſt in the harveſt and weſt in the ſpring. In *Kamtſchatka* are principally found the large grey geeſe, the gumenniki, and the grey and ſpeckled; the ſmall white gooſe is hardly ever found here. Again, in the North Sea, about *Kolimi* and other rivers, are vaſt numbers of them; and the beſt down 223 is brought to *Jakutſki* from theſe places. They catch them at the time they caſt their feathers, in the following manner:—They build huts with two doors, near thoſe places where they moſt commonly ſit at night. The fowler putting a white ſhirt on, above his cloaths, ſteals as near the flock as he can; and ſhewing

himſelf

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1 [Urile, Corvus aquaticus maximus Cristatus periophtalmiis Cinnaberinis, postea Candidis. Stell.]

himſelf he creeps away upon his hands and feet towards the 223 hut: then going through it, and obſerving that the geeſe have ſollowed him, he ſhuts the door behind him, and running round he comes in at the other door, which ſhutting likewiſe, he encloſes all the geeſe.

Mr. *Steller* obſerved in the month of *July* upon *Bering's* 136 iſland an eighth kind of geeſe, about the bigneſs of the white ſpeckled Its back, neck, and belly were white; its wings black; its cheeks white, yet ſomewhat greeniſh; its eyes black, with a yellow ring; the bill has a black ſtripe round it, and is red, with a knob like the *Chineſe* or *Muſcovy* geeſe: this knob is bare and yellowiſh, except that along it there is a ſmall ſtripe of bluiſh black feathers. The natives report that this ſort of geeſe is likewiſe found upon the firſt *Kurilſkoy* iſland; however they were never obſerved upon the continent.

The people of *Kamtſchatka* have different methods of catching 223 geeſe when they caſt their feathers; ſometimes they purſue them in boats; ſometimes they hunt them with dogs; but moſt of them are caught in pits, which they dig near thoſe lakes where the geeſe haunt, and cover up carefully with graſs: theſe the geeſe coming upon the ſhore fall into, and are caught.

There are eleven different ſpecies of ducks in *Kamtſchatka*; 136 namely, the ſeleſni, ſharp tails, tcherneti, plutonoſi, ſvaſi, krohali, lutki, gogoli, tchirki, turpani, and ſtone ducks: of which the ſeleſni, tchirki, krohali, and gogoli, winter among the ſprings; all the reſt come in the ſpring, and fly away in harveſt, as the geeſe do.

The ſharp tails are of that kind which writers call the *anas caudacuta, ſive havelda iſlandica*. They haunt in the bays of the ſea, or about the mouths of great rivers: they ſwim in flocks, and with their cry, which is extraordinary, make no diſagreeable muſick. Mr. *Steller* writes, that the larynx, or lower part of their throat, has three openings, covered with

136 thin membranes. The natives call this fowl aangitch, from their manner of crying.

The turpan is called by writers the black duck *. They are not ſo numerous about *Kamtſchatka* as at *Ochotſka*, where they are caught in great plenty about the equinox. Fifty or more of the natives here going out in boats ſurround a whole flock, which in time of the flood they drive into the mouth of the river *Ochotſka*; and ſo ſoon as it begins to ebb, and the water in the bay turns low, all the inhabitants fall upon them, and kill them with clubs in ſuch numbers, that every one gets 20 or 30 for his ſhare.

The ſtone ducks † have not hitherto been obſerved in any other place; they breed in the ſummer time in the rivers. The drakes are particularly beautiful, their head being like black velvet, and having two white ſpots upon their noſe, which extend beyond the eyes, and end in a clay-coloured ſtripe behind their head: there is a ſmall white ſpot near each ear; their bills are broad and flat, like thoſe of other ducks; they are of a bluiſh colour, and their necks of a bluiſh black; upon their breaſts are black feathers with a white border below; the feathers are ſmaller and broader above; the fore part of the back and belly are bluiſh, but more blackiſh towards the tail; acroſs both wings are broad white ſtripes with black borders; their ſides, under the wings, are of a clay colour; the large feathers of the wings, except ſix, bluiſh; theſe are black and roughiſh like velvet; the two laſt are white with black borders, and the ſecond row of the large wing feathers are all black, the third grey, two only of theſe feathers having white ſpots upon their ends: their tails are ſharp, and their feet pale coloured: they weigh about two pounds. The female is far from being ſo beautiful: her feathers are black, each

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* Anas niger. WILLOUGHBY.

† Anas picta capite pulchre faſciato. STELLER.

being ſomewhat yellowiſh at the end, with a ſmall white ſtripe; 136
the head is black, and upon its temples are ſmall white ſpots: it weighs about a pound and a half.

In the harveſt the females are found in the rivers, but none of the drakes: they are very ſtupid and eaſily caught where the waters are clear and ſhallow, for they do not fly away at the ſight of a man, but only dive, and therefore may be eaſily killed with poles, as I myſelf have frequently done. Mr. *Steller* ſaw ſeveral of this kind of ducks in the *American* iſlands.

They catch the ducks with nets in the following manner: 223
in a wood that happens to ſtand between two lakes, or between a lake and a river, they cut a ſtrait paſſage, through which the ducks fly during the ſummer; here in the harveſt, when the fiſhery is over, the natives faſten to long poles ſeveral nets, which in the evenings they raiſe as high as the ducks are uſed to mount: round the nets a ſtring is drawn, by which they can reef them together, as ſoon as they find the ducks entangled; but they ſometimes fly with ſuch force and in ſuch numbers, that they break through. They likewiſe catch them in ſmall rivers with nets ſtretched acroſs the ſtream: but this is a method not peculiar to *Kamtſchatka*.

To this claſs belongs likewiſe the gagari, or columbus, of 136
which there are four ſpecies *, three of which are large, and 825
the other ſmall: the firſt of the largeſt has a tail; the ſecond 787
a clay coloured ſpot upon its neck, a little above the crop: the third is called by *Wormius*, the northern lumme; and *Marſilius* calls the fourth the little lumme. The natives pretend to foretel the change of weather by their crying and flying; for they think that the wind muſt always blow from that point towards which they fly: however they are frequently deceived in their judgment.

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* 1. Colymbus maximus. GESN. STELL. 2. Colymbus arcticus lemme dictus. WORM. 3. Colymbus macula ſub mente caſtaneæ. STELL. 4. Colymbus ſive pedicipes cinereus. *Ejuſdem.*

136 Here are alſo found great numbers of ſmall birds, ſuch as
223 plovers and ſnipes of different ſorts, which they catch with ſnares and gins.

CLASS III. *Of the* LAND FOWLS.

136 The chief of theſe birds is the eagle, of which there are four ſpecies in *Kamtſchatka*: the firſt is the black eagle, with a white head, tail, and feet. Theſe are rare upon the main land of *Kamtſchatka*; but, according to Mr. *Steller*, they are found in plenty on the iſlands between it and *America*. They make their neſts (which are near ſix feet in diameter, and about a foot thick) of ſhrubs upon high cliffs, and in the beginning of *July*, lay two eggs. The young ones are as white as ſnow: theſe he ſaw upon *Bering*'s iſland, but not without danger from the old ones, which, even when he did not the leaſt hurt to their young, attacked him with ſuch violence that he could ſcarce defend himſelf from them with his ſtick. The ſecond is the white eagle, which the *Tunguſi* call elo: this I ſaw near *Nertchinſki*; however it is not white but grey. Mr. *Steller* ſays, that this is bred upon the river *Hariouſkovoi* which runs into the *Penſchinſka* ſea. The third is the black and white ſpotted eagle. The fourth, the dark clay-coloured eagle, the extremities of whoſe wings and tail are ſpotted: theſe two laſt mentioned abound moſt here.
262 The natives eat the eagles, and eſteem them agreeable food.

Here are likewiſe ſeveral other birds of prey, ſuch as vul-
136 tures, hawks of various kinds, owls, and above all, ravens, crows,
805 and magpies, which are the ſame with thoſe in *Europe*. Be-
825 ſides, here are great numbers of cuckoos, water ſparrows, growſe, partridges, thruſhes, larks, ſwallows, and ſeveral other ſmall birds, whoſe appearance in the ſpring the natives expect with great impatience, and thence begin their new year.

In the concluſion of this chapter we have added a liſt of ſome plants, beaſts, fiſhes, and birds, with their names in the *Engliſh*, *Ruſſian*, *Kamtſchatka*, *Koratſki*, and *Kurilſki* languages.

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1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

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A LIST *of ſome* PLANTS, BEASTS, FISHES, *and* BIRDS; *with their Names in the* Engliſh, Ruſſian, Kamtſchatka, Koratſki, *and* Kurilſki *Languages.*

Engliſh	*Ruſſian*	*Kamtſchatka*	*Koratſki*	*Kurilſki*
		PLANTS.		
The birch tree	Bereſnick	Heby	Lugune	
Poplar	Topſlucke	Thiſpiai	Yakul	
Willow	Vetelnicke	Liumtche	Tekila	
Alder	Olchoſnike	Sikite	Nikilieu	Aſſe
Service tree	Rebenike	Kaihine	Eloene	Korunoni
Juniper	Moſhevelnike	Kahaine	Valvakitche	Pakæpnairemamai
Cherry laurel	Tchelemaſnike	Kalhame	Eloene	
Dog brier	Shipovnike	Kavaſhe	Pitctakachatche	Kopokone
Honeyſuckle,	Shimſlode	Luſhinike	Nitchivoy	Enumetam
Barberries	Boiariſhnike	Horatenune	Pitkitche	
Brambleberries	Moraſhka	Shiie	Etiette	Apuumenipe
Wortleberries	Golubitſa	Ningule	Lingule	Enumucuta
Cranberries	Kliukva	Tchikume	Emelkevina	Afitte
Bulberries	Briuſnitou	Tchahauhe	Tiunaane	Nipopkipe
		BEASTS.		
Sea calves	Tiulenne	Kolha	Memele	Retactore
Sea beaver	Babri	Kaiku	Kalaga	Rahku
Sea cat	Kotti	Tatlatche	Tatatche	Ounepe
A fox	Liſotſa	Tchaſhiai	Yaivne	Kimutpe
Sables	Cobali	Kembime	Kitighime	Na
Ermines	Goraoſlai	Doitchitche	Imahuhake	Taanerume
A wolf	Volka	Kitaia	Eglinguue	Orgia
Bear	Medved	Kaſha	Kainga	Theſe beaſts are not known in the Kurilſki iſlands
Glutton	Raſſamak	Timmi	Haeppi	
Marmotta	Evraſhka	Ciredätche	Gilnak	
Elk	Oleni	Eluahappe	Lugaki	
Stane ram	Kammenoi barenu	Guadinadatche	Kitipe	
		FISHES.		
A large kind of ſalmon	Tchavitche	Tchovnitche	Evutche	Tchivira
Red fiſh	Kraſhnoiriha	Kehiviſhe	Niovoai	Siitchine
The humpback	Gorbuſhe	Koanautchi	Kalal	Siakipa
Turbot	Kambala	Sigiſigh	Alpa	Tantaka
Lampreys	Minoghi	Kanaganſhe	Unknown	Unknown
Smelts	Korouchi	Innahu		
Herring	Seldi	Neriner		
Skate	Skata	Kopaſhu	Kammiahacke	Kapaſhu
Cod fiſh	Freſka	Battui	Unknown	Unknown
Whales	Kili	Dai	Junghi	Rika
		BIRDS.		
Great ſea cormorant	Bolaſhoi tchaika	Atuma	Attume	Pongapiphe
Swan	Lebed	Matame	Kamtchan	
Geeſe	Gouſſed	Kſude	Gecloaine	Kuntape
A drake	Celeſna	Baine	Geſtchogatche.	Bakariku
Stone ducks	Kammenia utki	Nikingike	Unknown	Vaiout
Widgeons	Gargari, Aſhozi	Yovaiva		Ceſſe
Eagles	Orli	Selche	Tilmiti	Surgaar
Hawkes	Saholi	Shiſhi	Tilmitil	
Partridges	Kuropatki	Euihtchitche	Euette	Niepue
Crows	Voronni j	Kaka	Tchautchavao-la yelle	Paſkure
Magpies	Saroki	Kahitchectche	Unkitigin	Kakuk
Ravens	Voronitcherni	Hagulhak	Nimetta yelle	
Swallows	Laſlotchki	Kaiukutche	Kavalingek	Kuahan
Larks	Javoronki	Tchelaalai	Geatcheiere	Rikintchire
Cuckows	Kokaſhke	Koakoutchitche	Kaikuke	Kahkok
Snipes	Kuliiki	Soakulutche	Tcheiaa	Etchikumama

Of

CHAP. XI.

Of INSECTS.

136

251 AS *Kamtſchatka* abounds with lakes and marſhes, the ſwarms of inſects in the ſummer time would make life intolerable there, if it were not for the frequent winds and rains. The maggots are ſo numerous as to occaſion great deſtruction to their proviſions, particularly in the time of preparing their fiſh, which are ſometimes entirely deſtroyed by them. In the months of *June*, *July*, and *Auguſt*, when the weather happens to be fine, the muſketoes and ſmall gnats are very troubleſome; however the inhabitants do not ſuffer much from them, as they are at that time, upon account of the fiſhery, out at ſea, where by reaſon of the cold and wind few of theſe inſects are to be met with.

136 It is but lately that bugs appeared upon the river *Awatſcha*, which were brought thither in cheſts and cloaths: they are not yet known in *Kamtſchatka*. Upon account of the wet weather and ſtorms few of the butterfly kind are found here, except in ſome woods near the upper *Kamtſchatkoi* fort, where they abound. It has been obſerved that numbers of theſe inſects have ſettled upon veſſels which were 30 verſts from the ſhore: it appears ſomewhat extraordinary that they ſhould be able to fly to ſuch a diſtance without reſting; moſt likely the ſtorms ſo frequent here might drive them out to ſea, and by their violence ſupport them.

136 825 842 There are few ſpiders in *Kamtſchatka*; ſo that the women who are fond of having children, and who have a notion that theſe inſects ſwallowed render them fruitful and their labour eaſy, have great trouble to find them. Nothing plagues the

natives

Nothing plagues the
natives in their huts ſo much as the lice and fleas; the 136
women ſuffer moſt from the former, by wearing very long, 515
and ſometimes falſe hair. Mr. *Steller* was told, that near the 302
ſea is found an inſect that reſembles a louſe, which working itſelf through the ſkin into the fleſh is never to be cured, unleſs by cutting the creature intirely out; and that the fiſhers are very much afraid of them.

It is remarkable that in *Kamtſchatka* there are neither frogs, 136
toads, nor ſerpents. Lizards, indeed, are numerous enough, which 825
the natives look upon as ſpies ſent from the infernal powers for 787
information, and to foretel their death: therefore they are very careful whenever they find them to cut them into ſmall pieces, that they may never carry back news to the power which ſent them; and if it happens that the animal eſcapes alive, it throws them into the greateſt grief and deſpair, as they expect every hour to die, which indeed ſometimes happens from their own fear and deſpondency, and then ſerves to confirm the ſuperſtition to others.

CHAP. XII.

Of the TIDES *in the* Penſchinſka *Sea and Eaſtern Ocean.* 133

IT might perhaps appear ſufficient to ſay, that the tides are agreeable in theſe ſeas to what are obſerved in others; but as I made ſome obſervations which appeared to me new, I think it proper to communicate them.

It is a known rule in general, that the ebb and flood happen twice in the natural day, and that the tides are higheſt about the new and full moon: however, I do not recollect that it has been obſerved that the ebbs and floods are not equal here, or that they do not happen at fixed times, but according to the age of the moon, as I obſerved in the *Penſchinſka* ſea; and if this general opinion be true, that the ebbs and floods in other ſeas are equal, and at fixed hours, then the *Kamtſchatkoi* ſea reſembles only the White Sea, where I am told that there is one high ſpring and one low flood in the ſame day. The laſt the natives call *maniha*; therefore I thought it proper carefully to relate the difference of the tides here, both with regard to the high water and the maniha: for the better underſtanding of which in the original is ſubjoined a long journal, which was kept for three months, and likewiſe the journal of Captain *Elagine*, which was taken at the mouth of the river *Ochotſka*, the *Kurilſki* iſlands, and the haven of *Petropaulauſkay*; which we omit, as it would only be a uſeleſs burthen to the *Engliſh* reader.

Now, in order to be the more intelligible, I muſt obſerve, that the ſea water which flows into the bays does not always run intirely back, but only according to the age of the moon; ſo that ſometimes in the time of ebb nothing remains but the water of the river which is within its own banks, at other times theſe banks are all overflowed with water. All the ſea water runs out about the full and new moon, when the flood follows immediately upon the ebb, and it riſes near eight feet. The flood continues about eight hours, and then it begins to ebb, which continues ſix hours; after which it flows again for three hours, the water not riſing quite a foot; at laſt the ebb begins, which continues ſeven hours, and all the ſea water runs out In this manner are the floods and ebbs regulated for three days after the full and new moon; at the end of which the time of the flowing and ebbing, and height of the flood and ebb, is leſs, the maniha greater, the ſea water which was before ſaid to run all out now remains in ſome part, and as the moon approaches the quadratures, the large tides grow leſs and the maniha greater; ſo that after the ebb of the maniha the greater quantity of water remains ſtill in the bays, and at laſt, at the quarter moons, what were the high tides change into the maniha, and the maniha into them. I reckon the change of the high tide into the maniha, and of the maniha into the high tide, from the time when one tide begins at midday and the other at midnight; or when it begins to flow or ebb at ſix hours in the morning and ſix in the afternoon.

I ſhall likewiſe communicate the methods that I followed in my obſervations: In the mouth of a river I placed a ſtake, divided into feet and inches of the *Paris* meaſure; the loweſt mark was at the height of the river water in the time of the ebb at the new and full moon. This ſtake I fixed without great trouble, but am obliged to own that I was not able to aſcertain exactly the height of the water in the flood, becauſe it always comes in ſurges, which renders the ſtake wet ſomewhat higher than the true depth; nor can I certainly determine whether the water continues at the ſame height, or not, for any certain time.

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THE

OF THE
NATIVES of *Kamtſchatka*,
AND THEIR
CUSTOMS *and* MANNERS.

PART III.

CHAP. I.

105

Of the NATIVES *of* Kamtſchatka *in general.*

THE natives of *Kamtſchatka* are as wild as the country itſelf. Some of them have no fixed habitations, but wander from place to place with their herds of rein-deer; others have ſettled habitations, and reſide upon the banks of the rivers and the ſhore of the *Penſchinſka* ſea, living upon fiſh and ſea animals, and ſuch herbs as grow upon the ſhore: the former dwell in huts covered with deer-ſkins, the latter in places dug out of the earth; both in a very barbarous manner: their diſpoſitions and tempers are rough; and they are intirely ignorant of letters or religion.

Z The

101 131 The natives are divided into three different people, namely, the *Kamtſchadales*, *Koreki*, and *Kuriles*. The *Kamtſchadales* live upon the ſouth ſide of the promontory of *Kamtſchatka*, from the mouth of the river *Ukoi* to the *Kurilſkaya Lopatka*, and upon the firſt *Kurilſkoy* iſland *Schumtſchu*: the *Koreki* inhabit the northern parts on the coaſt of the *Penſchinſka* ſea as far as the river *Nuktchan*, and round the Eaſtern Ocean almoſt to *Anadir*: the *Kuriles* inhabit the ſecond *Kurilſkoy* iſland, and the other iſlands in that ſea, reaching as far as thoſe of *Japan*.

101 184 197 171 The *Kamtſchadales* may be divided into the northern and ſouthern; the northern people, who live along the river *Kamtſchatka* on the coaſt of the Eaſtern Ocean as far as the mouth of the river *Ukoi*, and ſouthward to the mouth of the river *Nalacheva*, may be eſteemed the principal nation; their manners being more civiliſed, and their language appearing every where to be the ſame; whereas the others ſpeak differently on every iſland.

The ſouthern nation live along the coaſt of the Eaſtern Ocean, from the *Nalacheva* to the *Kurilſkaya Lopatka*, and thence along the *Penſchinſka* ſea northwards to the river *Hariouſkovoy*.

The *Koreki* are commonly divided into two nations; one is called the rein-deer *Koreki*, and the other the fixed *Koreki*. The former wander with their herds from place to place; the latter live near the rivers, like the *Kamtſchadales*. Their languages are ſo different that they do not underſtand each other, particularly thoſe that border upon the *Kamtſchadales*, from whom they have borrowed much of their language.

101 177 194 Some likewiſe divide the *Kuriles* into two different nations or tribes, calling one the diſtant and the other the nearer *Kuriles*. By the diſtant they underſtand the inhabitants of the ſecond *Kurilſkoy* iſland and the others that lie near *Japan*; by the nearer *Kuriles*, the inhabitants of *Lopatka* and of the firſt iſland. But this diviſion is not proper; for though the inhabitants of the firſt iſland and the *Lopatka* differ ſomewhat from the *Kamtſchadales*

both in their language and cuſtoms, yet we have reaſon to believe 101
they are the ſame people; the difference only ariſing from their 177
neighbourhood, and intermarriages with the true *Kuriles*. 184

The *Kamtſchadales* have this particular cuſtom, that they en-
deavour to give every thing a name in their language which may 192
expreſs the property of it; but if they don't underſtand the thing
quite well themſelves, then they take a name from ſome foreign
language, which perhaps has no relation to the thing itſelf;
as, for example, they call a prieſt *Bogbog*, becauſe probably they
hear him uſe the word *Bogbog*, God; bread they call *Brightatin*
Augſh, that is, *Ruſſian* root; and thus of ſeveral other words to
which their language is a ſtranger.

The names which the *Ruſſians* give theſe different nations they 161
did not take from the natives, but rather from their neighbours:
for example, the name of the *Kamtſchadales* was taken from the
Koreki, who call them *Kontchal*. The derivation of the name
Koreki is uncertain; however *Steller* thinks that it probably came
from the word *Kora*, which in their language ſignifies a rein-deer;
and that the *Ruſſian* Coſſacks frequently hearing the word *Kora*,
or obſerving that their whole riches conſiſted in rein-deer, gave
them the name of *Koreki*.

The inhabitants of *Kamtſchatka* have three languages, that 197
of the *Kamtſchadales*, the *Koreki*, and *Kuriles*; each of which is 177
divided into different dialects. The *Kamtſchatka* language has
three principal dialects: the firſt is uſed by the northern, the
ſecond by the ſouthern, which differ ſo much that one may look
upon them as different languages; however they can underſtand
one another without any interpreter: the third dialect is that
which is ſpoken by thoſe who live upon the *Penſchinſka* ſea,
between the rivers *Vorovſkaya* and *Teghil*, which is compoſed of
both the above-mentioned dialects and ſome words taken from
the *Koreki*.

000 The language of the *Koreki* conſiſts of two dialects; one of which is ſpoken by the rein-deer *Koreki*, and the other by the fixed. We are not, indeed, certain what other dialects may be amongſt them, being well acquainted only with thoſe who are 191 ſubject to the *Ruſſians*; but it is probable that thoſe who are ſcattered among the iſlands may have ſome difference in their way of ſpeaking. The *Kamtſchatka* language is ſpoken half in the throat and half in the mouth: the pronunciation is ſlow and difficult, and ſeems to indicate a timorous, ſlaviſh, and deceitful people; as in fact they are.

The *Koreki* ſpeak aloud, and in a ſcreaming tone; their words are long, but their ſentences ſhort, and their words generally begin with two vowels, and end with one or two more: as for example, uemkai, a rein-deer which has not been driven.

The *Kuriles* ſpeak ſlow, diſtinctly, and agreeably: their words are middling, the vowels and conſonants being juſtly mixed: and of all theſe wild people the *Kuriles* are the beſt, being honeſt, conſtant, civil, and hoſpitable.

CHAP. II.

161 *Some Conjectures concerning the Names of the* Kamtſchadales, *and the other Inhabitants of* Kamtſchatka.

SOME aſſert, that the *Kamtſchadales* were ſo named by the *Ruſſians* from the river *Kamtſchatka*, but it was called ſo before the *Ruſſians* had diſcovered it, and had its name from a chieftain, called *Konchata.*

We cannot find likewiſe why the *Koreki* call the *Kamtſchadales*, *Kontchalo*, nor can they give any reaſons for it themſelves.

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101 The *Kamtſchadales*, beſides the general name *Itelmen*, diſtinguiſh themſelves by adding the name of the river, or remarkable place where they live, as *Kikſha-ai*, an inhabitant upon the Great River; *Suatchu-ai*, an inhabitant upon the river *Awatſcha*; for the word *ai* being added to any river or remarkable ſituation, denotes inhabitant of that place, as the word *Itelmen* is the general name for inhabitant. Thoſe who think *Konchata* to have been a great captain, ſeem to have applied to him only all the brave actions which ought to be attributed to the ſeveral inhabitants upon the river *Elouki*, who are called *Koatche-ai*, or, in the common way of ſpeaking, *Kontchat*: beſides, this being a received opinion, that the inhabitants of the river *Elouki* are the braveſt of all the *Kamtſchadales*, the *Koreki*, who are their neighbours, might eaſily call the whole nation *Kamtſchadales* from their name *Koatche-ai*; and it is nothing extraordinary to find the word *Koatche-ai* changed into *Kontchala*, and *Kontchala* into *Kamtſchadale*, as we find ſeveral ſimilar examples, not only among theſe barbarous people, but the politeſt nations of *Europe*.

174 With regard to the place where the *Kamtſchadales* came from, or at what time they firſt ſettled here, we can have no certain account; for all that can be obtained from theſe people is only fabulous tradition; and they pretend that they were created upon this very ſpot, and ſay, their firſt anceſtor was *Kutbu*, who formerly lived in the heavens: however by their manners, cuſtoms, language, dreſs, and other circumſtances, it would appear that the *Kamtſchadales* came over from *Mungalia*. Of the antiquity of theſe people *Steller* gives the following proofs: 1*ſt*, that they have loſt every tradition of their origin. 2*d*. That before the arrival the *Ruſſians*, they knew little of any other people, except the *Koreki* and *Tchukotſkoi*; and it is but lately that they came to any knowledge of the *Kuriles* and *Japaneſe*, and this was owing to the arrival of the latter

among them to trade, from a *Japaneſe* boat having been caſt away upon their coaſt. 3*d*. That theſe people are extremely numerous notwithſtanding ſo many are deſtroyed every year by wild beaſts, *&c.* 4*th*. From their great knowledge of the virtues and uſes of the natural produce of the country, which cannot be attained in a ſhort time, not to mention that they have no more than four months in the year left for this enquiry, and great part of thoſe too they muſt employ in fiſhing and making proviſions for winter. 5*th*. All their inſtruments and houſhold furniture are different from thoſe of other nations, and their neceſſities ſeem to have directed the invention of moſt of them. 6*th*. That their uncultivated ſtate of nature and paſſions ſeem to differ very little from that of the brute beaſts, pleaſures being their only purſuit, having no idea of futurity.

The following reaſons incline us to think that they take their origin from the *Mungals*, not from the *Tartars* who live upon the river *Amur*, nor from the *Kuriles* or *Japaneſe*; for if they had ſprung from the *Tartars* it is probable they would have ſettled about the river *Lena*, where the *Jakutſki* and *Tunguſi* live at preſent, theſe places being formerly uninhabited, and much more fruitful than *Kamtſchatka*; nor can we imagine that they were driven thence by the *Jakutſki*; the difference of their manners, and make of their bodies from the *Kuriles* is ſuch that we cannot believe they ſprung from them; and that their origin ſhould be *Japaneſe* appears improbable, becauſe their ſettlement muſt have been prior to the ſeparation of the *Japaneſe* from the empire of *China*; and that they were ſettled there long before the *Japaneſe* fixed in theſe iſlands in the ſea of *Kamtſchatka* appears from their not knowing the uſe of iron, or iron ore, though it is above two thouſand years ſince the *Mungals* made their arms and other inſtruments of iron, and the other *Tartars* knives and daggers of copper; therefore it is probable that the *Kamtſchadales* were driven hither by the tyranny of the Eaſtern conquerors, as the *Lopari*, *Oſtiaks*, and *Samojeds* were driven to the extremities of the North by the encroachments of other *European* nations. If *Kamtſchatka* had not been inhabited before the *Tunguſi* had got a ſettlement, it is probable they would have fixed here, as being ſafer from the dangers of any ſudden attacks of their enemies. 174

Thus it appears likely, that the *Kamtſchadales* lived formerly in *Mungalia* beyond the river *Amur*, and made one people with the *Mungals*, which is farther confirmed by the following obſervations, ſuch as the *Kamtſchadales* having ſeveral words common to the *Mungal Chineſe* language, as their terminations in *ong*, *ing*, *oang*, *chin*, *cha*, *ching*, *kſi*, *kſung*; it would be ſtill a greater proof if we could ſhow ſeveral words and ſentences the ſame in both languages; but not to inſiſt only upon the language, the *Kamtſchadales* and *Mungals* are both of a ſmall ſtature, are ſwarthy, have black hair, a broad face, a ſharp noſe, with the eyes falling in, eyebrows ſmall and thin, a hanging belly, ſlender legs and arms; they are both remarkable for cowardice, boaſting, and ſlaviſhneſs to people who uſe them hard, and for their obſtinacy and contempt of thoſe who treat them with gentleneſs.

CHAP. III

Of the ANCIENT STATE *of the Natives of* Kamtſchatka.

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BEFORE the *Ruſſian* conqueſt they lived in perfect freedom, having no chief, being ſubject to no law, nor paying any taxes; the old men, or thoſe who were remarkable for their bravery, bearing the principal authority in their villages, though none had any right to command or inflict

142 puniſhment. Although in outward appearance they reſemble the other inhabitants of *Siberia*, yet the *Kamtſchadales* differ in this, that their faces are not ſo long as the other *Siberians'*, their cheeks ſtand more out, their teeth are thick, their mouth large, their ſtature middling, and their ſhoulders broad, particularly thoſe people who inhabit the ſea coaſt.

515 Their manner of living is ſlovenly to the laſt degree; they never
302 waſh their hands nor face, nor cut their nails; they eat out of the ſame diſh with the dogs, which they never waſh; every thing
264 about them ſtinks of fiſh; they never comb their heads, but both men and women plait their hair in two locks, binding the ends with ſmall ropes: when any hair ſtarts out, they ſow it with threads to make it lie cloſe; by this means they have ſuch a quantity of lice that they can ſcrape them off by handfuls, and they are naſty enough even to eat them. Thoſe that have not natural hair ſufficient wear falſe locks, ſometimes as much as weigh ten pounds, which makes their heads look like a haycock.

762 They have extraordinary notions of God, of ſins, and good
181 actions. Their chief happineſs conſiſts in idleneſs and ſatisfying their natural luſts and appetites; theſe incline them to ſinging,
517 dancing, and relating of love ſtories Their greateſt unhappineſs
554 or trouble is the want of theſe amuſements: they ſhun this by all
157 methods, even at the hazard of their lives, for they think it more eligible to die than to lead a life that is diſagreeable to them; which opinion frequently leads them to ſelf-murder. This was ſo common after the conqueſt, that the *Ruſſians* had great difficulty to put a ſtop to it. They are chiefly employed in providing what is abſolutely neceſſary for the preſent, and take no care for the future. They have no notion of riches, fame, or honour; therefore covetouſneſs, ambition, and pride, are unknown among them. On the other hand, they are careleſs, luſtful, and
578 cruel: theſe vices occaſion frequent quarrels and wars among them

ſometimes

theſe vices occaſion frequent quarrels and wars among them
ſometimes with their neighbours, not from a deſire of increaſing 578
their power, but from ſome other cauſes; ſuch as the carrying 583
off their proviſions, or rather their girls, which is frequently
practiſed as the moſt ſummary method of procuring a wife.

Their trade is likewiſe not ſo much calculated for the acquiſition 439
of riches as for procuring the neceſſaries and conveniencies of life.
They ſell the *Koreki* ſables, fox and white dog ſkins, dried
muſhrooms, or ſuch trifles; and receive in exchange cloaths made
of deer-ſkins and other hides: among themſelves they exchange 438
what they abound with for what they want, as dogs, boats, diſhes,
troughs, nets, hemp, yarn, and proviſions. This kind of barter 437
is carried on under a great ſhew of friendſhip; for when one 576
wants any thing that another has, he goes freely to viſit him, and
without any ceremony makes known his wants, although perhaps he
never had any acquaintance with that perſon before: the landlord
is obliged to behave according to the cuſtom of the country;
and bringing whatever his gueſt has occaſion for, gives it him.
He afterwards returns the viſit, and muſt be received in the ſame
manner; ſo that both parties have their wants ſupplied.

Their manners are quite rude: they never uſe any civil expreſſion 576
or ſalutation; never take off their caps, nor bow to one 157
another; and their diſcourſe is ſtupid, and betrays the moſt conſummate
ignorance; and yet they are in ſome degree curious, and
inquiſitive upon many occaſions.

They have filled almoſt every place in heaven and earth with 771
different ſpirits, which they both worſhip and fear more than God: they offer them ſacrifices upon every occaſion, and ſome carry little idols about them, or have them placed in their dwellings; but, with regard to God, they not only neglect to worſhip him; but, in caſe of troubles and misfortunes, they curſe and blaſpheme him.

They keep no account of their age, though they can count as 802
far as one hundred; but this is ſo troubleſome to them that

802 without their fingers they do not tell three. It is very diverting to ſee them reckon more than ten; for having reckoned the fingers of both hands they claſp them together, which ſignifies ten; then they begin with their toes, and count to twenty; after which they are quite confounded, and cry, *Matcha?* that is, Where ſhall 805 I take more. They reckon ten months in the year, ſome of which are longer and ſome ſhorter; for they do not divide them by the changes of the moon, but by the order of particular occurrences that happen in thoſe regions, as may be ſeen in the following table:

1ſt. Purifier of ſins; for in this month they have a holiday for the purification of all their ſins.

2d. Breaker of hatchets, from the great froſt.
3d. Beginning of heat.
4th. Time of the long day.
5th. Preparing month.
6th. Red fiſh month.
7th. White fiſh month.
8th. Kaiko fiſh month.
9th. Great white fiſh month.
10th. Leaf falling month.

This laſt month continues to the month of *November*, or that of the purification, and it is the length of almoſt three months; however, theſe names of the months are not the ſame every where, but are only proper to the inhabitants upon the river *Kamtſchatka*: the inhabitants of the northern parts give them different names, ſuch as,

1ſt. The month of the rivers' freezing
2d. Hunting month.
3d. Purifier of ſins.
4th. Breaker of hatchets, from the great froſt.
5th. Time of the long day.
6th. Sea beavers' puppying time

7th. Sea calves' puppying time. 805
8th. Time when the tame deer bring forth their young.
9th. When the wild deer bring forth.
10th. Beginning of the fiſhery.

Their diviſion of time is pretty ſingular; they commonly
divide our year into two, ſo that winter is one year, and ſummer
another: the ſummer year begins in *May*, and the winter in
November.

They do not diſtinguiſh the days by any particular appellation,
nor form them into weeks or months, nor yet know how many
days are in the month or year. They mark their epochs by ſome
remarkable thing or other, ſuch as the arrival of the *Ruſſians*,
the great rebellion, or the firſt expedition to *Kamtſchatka*. They 212
have no writings, nor hieroglyphick figures, to preſerve the memory
of any thing; ſo that all their knowledge depends upon
tradition, which ſoon becomes uncertain and fabulous in regard to
what is long paſt.

They are ignorant of the cauſes of eclipſes, but when they 821
happen, they carry fire out of their huts, and pray the luminary
eclipſed to ſhine as formerly. They know only three conſtellations;
the Great Bear, the Pleiades, and the three ſtars in
Orion; and give names only to the principal winds.

Their laws in general tend to give ſatisfaction to the injured 681
perſon. If any one kills another, he is to be killed by the rela- 754
tions of the perſon ſlain. They burn the hands of people
who have been frequently caught in theft, but for the firſt
offence the thief muſt reſtore what he hath ſtolen, and
live alone in ſolitude, without expecting any aſſiſtance from
others. They think they can puniſh an undiſcovered theft
by burning the ſinews of the ſtone-buck in a publick meeting
with great ceremonies of conjuration, believing that as theſe
ſinews are contracted by the fire ſo the thief will have all
his limbs contracted.

A a 2

578 his limbs contracted. They never have any diſputes about their land or their huts, every one having land and water more than ſufficient for his wants.

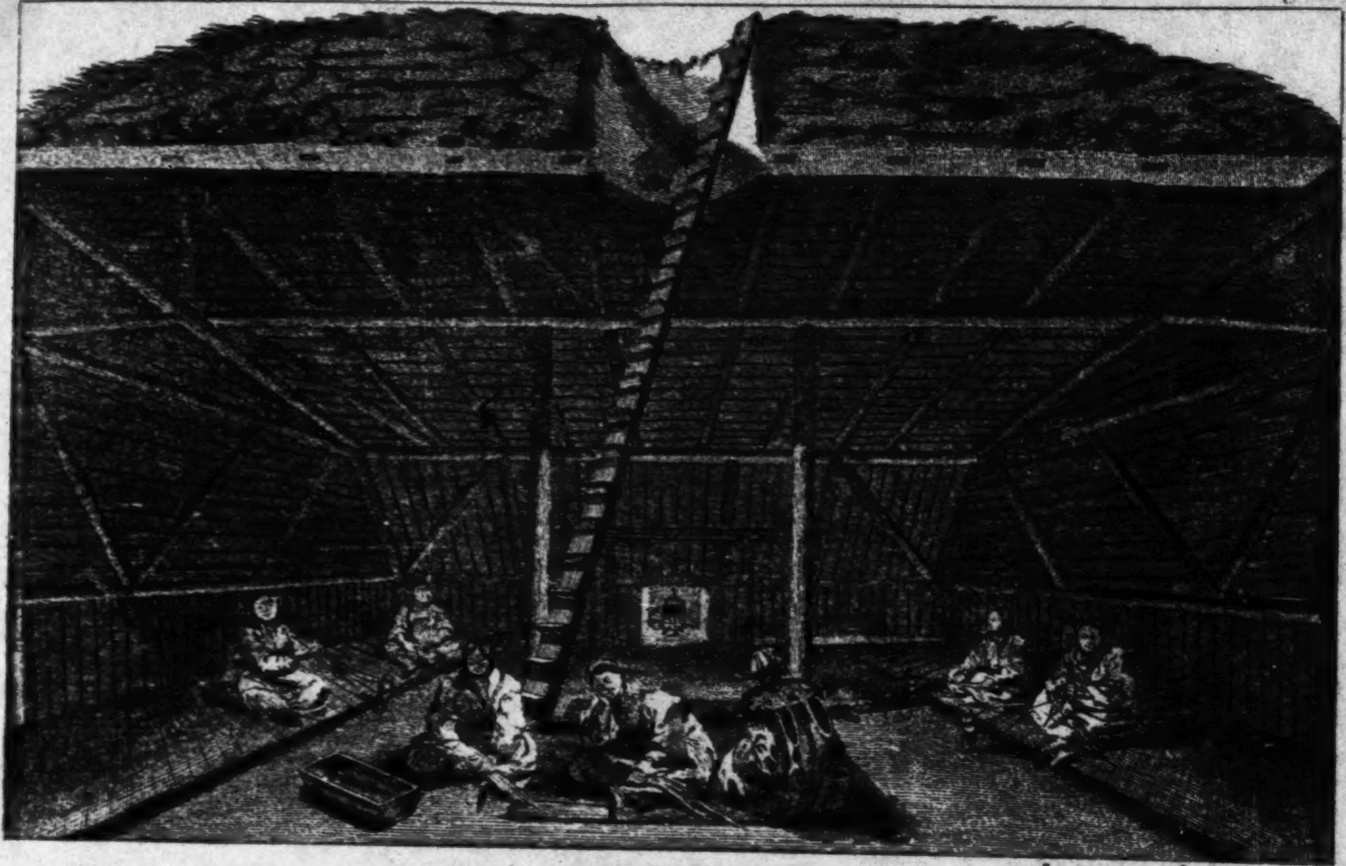
186 Although their manner of living be moſt naſty, and their
177 actions moſt ſtupid, yet they think themſelves the happieſt people in the world, and look upon the *Ruſſians* who are ſettled among them with contempt: however this notion begins to change at preſent; for the old people who are confirmed in their cuſtoms, drop off, and the young ones being converted to the Chriſtian religion, adopt the cuſtoms of the *Ruſſians*, and deſpiſe the barbarity and ſuperſtition of their anceſtors.

622 In every *Oſtrog*, or large village, by order of her Imperial
794 Majeſty, is appointed a chief who is ſole judge in all cauſes, ex-
871 cept thoſe of life and death; and not only theſe chiefs, but even
R. the common people, have their chapels for publick worſhip.
177 Schools are alſo erected in almoſt every village to which the
•622 *Kamtſchadales* ſend their children with great pleaſure: by this
means it is to be hoped, that their barbarity will be in a ſhort
time rooted out.

CHAP.

342
283
417

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal



The Inside of a Winter Hut

facing P. 181

CHAP. IV

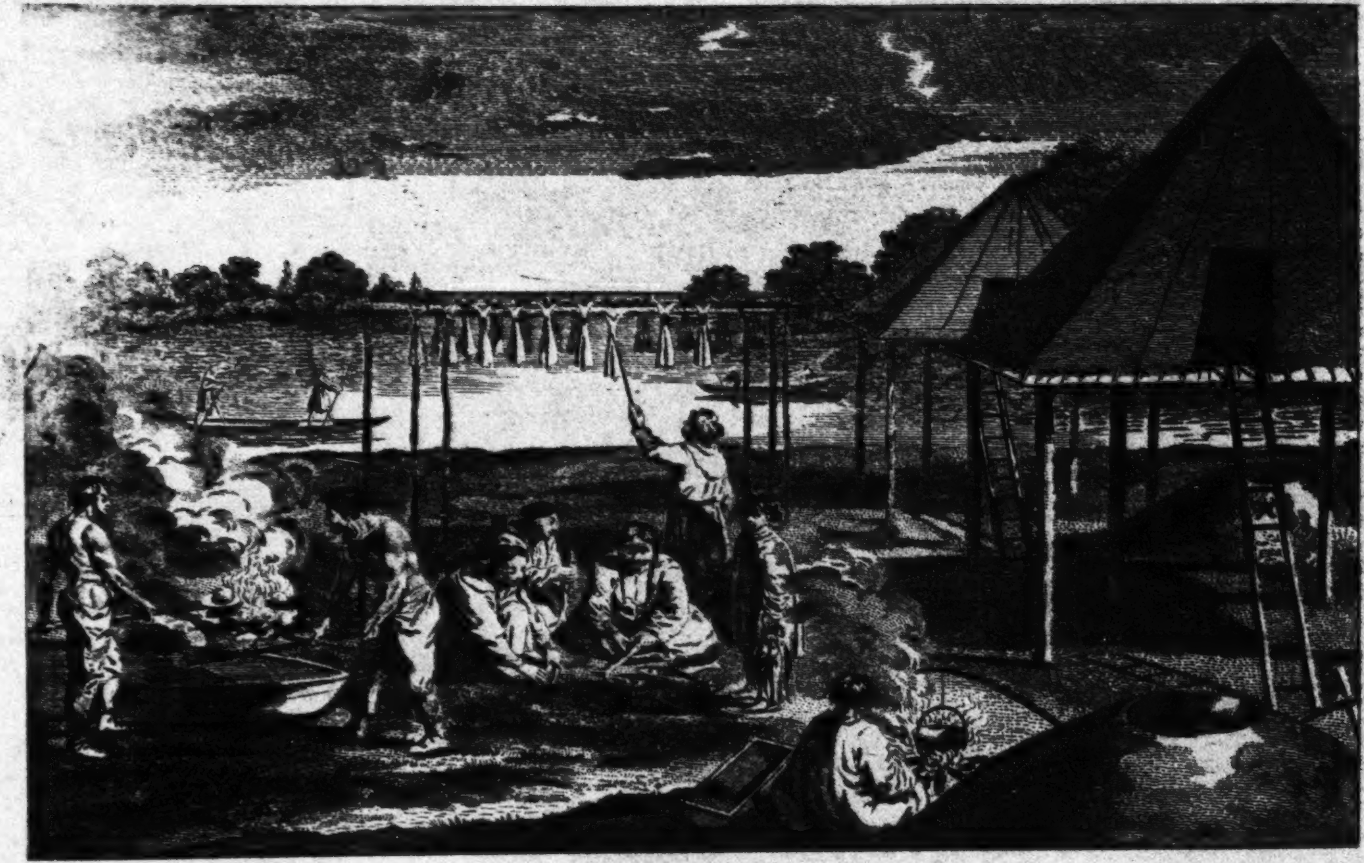
Of the OSTROGS, *or* HABITATIONS, *of the* Kamtſchadales. 361

UNDER the name of *Oſtrog* we underſtand every habitation conſiſting of one or more huts, which are all ſurrounded by an earthen wall or palliſadoe.

The huts are built in the following manner: they dig a 342
hole in the earth about five feet deep, the breadth and length of
which is proportioned to the number of people deſigned to live
in it. In the middle of this hole they plant four thick wooden
pillars; over theſe they lay balks, upon which they form their
roof or cieling, leaving in the middle a ſquare opening which
ſerves them for a window and chimney; this they cover with
graſs and earth, ſo that the outward appearance is like a round
hillock; but within they are of an oblong ſquare, and the fire-
place is in one of the long ſides of the ſquare: between the 352
pillars round the walls of their huts they make benches, upon
which each family lies ſeparately; but on that ſide oppoſite to
the fire, there are no benches, it being deſigned for their kitchen
furniture, in which they dreſs their victuals for themſelves and
dogs. In theſe huts where there are no benches, there are balks
laid upon the floor, and covered with mats. They adorn the
walls of their huts with mats made of graſs.

They enter their huts by ladders commonly placed near the 342
fire hearth, ſo that when they are heating their huts the ſteps 417
of the ladder become ſo hot, and the ſmoke ſo thick, as almoſt 626
to

Page 182



Summer Huts.

342
417

facing p. 182

342 to ſuffocate any one who is not inured to bear it: but the
417 natives find no difficulty in going out or in; and though they
626 can only fix their toes on the ſteps of the ladder, they mount
like ſquirrels; nor do the women heſitate to go through this
ſmoke with their children upon their ſhoulders; though there is
another opening through which the women are allowed to paſs;
but if any man ſhould pretend to do the ſame he would be
342 laughed at. The *Kamtſchadales* live in theſe huts all the winter,
after which they go out into others which they call balagans:
theſe ſerve them not only to live in during the ſummer, but
alſo for magazines. They are made in the following manner:
Nine pillars, about two fathom long or more, are fixed in the
ground, and bound together with balks laid over them, which
they cover with rods, and over all lay graſs, faſtening ſpars and
a round ſharp roof at top, which they cover with bramble, and
thatch with graſs. They faſten the lower ends of the ſpars to
the balks with ropes and thongs, and have a door on each ſide
one directly oppoſite to the other.

342 They have ſuch balagans, not only round their winter habitataions,
251 but alſo in thoſe places where they lay up their food in
ſummer; and they are certainly very convenient in this country
on account of the frequent rains, which would ſurely ſpoil all
their fiſh if it was not preſerved in ſuch places; beſides, when
they return from fiſhing and hunting in the harveſt, they leave
their dry fiſh here, 'till they can fetch it in the winter; and
this without any guard only taking away the ladders. If theſe
buildings were not ſo high the wild beaſts would undoubtedly
plunder them; for notwithſtanding all their precaution, the bears
ſometimes climb up and force their way into their magazines,
eſpecially in the harveſt when the fiſh and berries begin to grow
343 ſcarce. In the ſummer, when they go a hunting, they have,
beſides their balagans, huts made of graſs, in which they dreſs
their

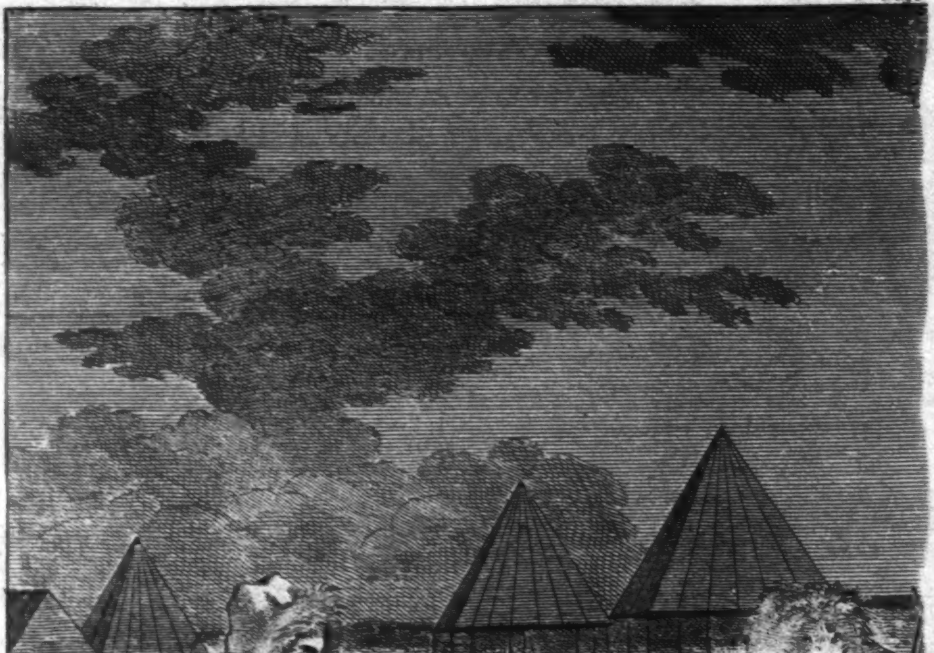
343 their victuals and clean their fiſh in bad weather; and the Coſſacks
boil their ſalt from ſea water in them. The villages, which
361 are well inhabited, having their common huts ſurrounded with
theſe balagans, make a very agreeable appearance at a diſtance.

The ſouthern *Kamtſchadales* commonly build their villages in thick woods, and other places which are naturally ſtrong, not leſs than twenty verſts from the ſea; and their ſummer habitations are near the mouths of their rivers; but thoſe who live upon the *Penſchinſka* ſea and the Eaſtern Ocean build their villages very near the ſhore.

779 They look upon that river near which their village is ſituated,
621 as the inheritance of their tribe; and if one or two families at
423 any time deſire to live ſeparate from their native village, they
build themſelves huts upon the ſame river, or ſome branch that
614 falls into it; from which it is natural to imagine, that the inhabitants of every village have originally ſprung from the ſame father; and the *Kamtſchadales* themſelves ſay, that *Kut*, whom they ſometimes call God, and ſometimes their firſt father, lived two years upon each river, and left the children that river, on which they were born, for their proper inheritance; and though formerly the *Kamtſchadales* uſed only to hunt and fiſh upon their own rivers, they now wander above 200 verſts to kill the ſea animals upon the *Awatſcha*, or the *Kurilſkaya Lopatka*.

CHAP.

Page



Method of producing Fire.

opposite p. 184

CHAP. V.

415 325 *Of their* HOUSHOLD FURNITURE, *and other neceſſary Utenſils.*

ALL the *Kamtſchatka* houſhold furniture conſiſts in diſhes, bowls, troughs, and cans made of birch bark. As theſe people have not the uſe of metals, we think it is proper to explain, how without the uſe of inſtruments of iron, they are able to perform their houſhold work, ſuch as building, ſawing, making of fire, dreſſing their victuals; being all the while ſo ignorant that they can ſcarcely count ten. How powerfully does neceſſity work upon the moſt inſenſible minds!

412 Before the arrival of the *Ruſſians* the *Kamtſchadales* uſed ſtones and bones inſtead of metals, out of which they made hatchets, ſpears, arrows, needles, and lances. Their hatchets were made of the bones of whales and rein-deer, and ſometimes of agate or flint ſtones. They were ſhaped in form of a wedge, and faſtened to
321 crooked handles. With theſe they hollowed out their canoes,
415 bowls, and troughs; but with ſo much expence of trouble and
252 time, that a canoe would be three years in making, and a large
501 bowl one year. For this reaſon, a large canoe or trough was in as great eſteem among them as a veſſel of the moſt precious metal and fineſt workmanſhip is with us; and the village which was in poſſeſſion of ſuch valued themſelves extremely upon it, eſpecially if they were maſters of a bowl which would ſerve for more than one gueſt. Theſe bowls they dreſs their victuals in, and heat their broth by throwing red-hot ſtones into it.

412 Their knives were made of a greeniſh mountain chryſtal, ſharp-pointed, and ſhaped like a lancet, which was ſtuck into

412 a wooden handle. Of ſuch chryſtals were made likewiſe their
294 arrows, ſpears, and launcets, with which they continue ſtill to
let blood. Their ſewing needles they made of the bones of ſables,
with which they not only ſewed their cloaths together, but made
alſo very curious embroidery.

177 In order to kindle fire they have a board of dry wood with
372 round holes in the ſides of it, and a ſmall round ſtick; this they
rub in a hole 'till it takes fire, and inſtead of tinder they uſe
dry graſs beat ſoft. Theſe inſtruments are held in ſuch eſteem
by the *Kamtſchadales* that they are never without them, and they
value them more than our ſteels and flints: but they are exceſſively
412 fond of other iron inſtruments, ſuch as hatchets, knives,
177 or needles; nay, at the firſt arrival of the *Ruſſians* a piece of
325 broken iron was looked upon as a great preſent, and even yet
they receive it with thankfulneſs, knowing how to make uſe of
the leaſt fragment either to point their arrows or make darts,
which they do by hammering it out cold between two
ſtones. All the ſavage inhabitants of theſe parts are particularly
fond of iron, and know how to manage it very
439 curiouſly. As ſome of them delight in war, the *Ruſſian*
325 merchants are forbid to ſell them any warlike inſtruments; but
415 they are ingenious enough to make ſpears and arrows out of the
R. iron pots and kettles which they buy; and they are ſo dextrous
177 when the eye of a needle breaks as to make a new eye, which
41 they will repeat until nothing remains but the point. Even at the
time when I was there it was only the better ſort and thoſe that
lived near to the *Ruſſians* that made uſe of iron or copper veſſels,
the reſt ſtill preferring their wooden diſhes.

325 It is ſaid, that the *Kamtſchadales* knew the uſe of iron even
439 before the arrival of the *Ruſſians*; that they received it from the
177 *Japaneſe*, who came to the *Kurilſki* iſlands, and once to the
mouth of the river *Kamtſchatka*; and that the name which the
Kamtſchadales give the *Japaneſe* of *Shiſman* comes from *ſhiſh*,

325 a needle. The *Japaneſe* certainly uſed to come and trade to
439 the *Kurilſki* iſlands, for I found there a *Japaneſe* ſabre, a
177 japanned waiter, and ſilver ear-rings, which could be brought
from no other place.

Of all the curioſities made by theſe wild people with their ſtone
321 knives and hatchets, nothing ſurpriſed me ſo much as a chain of
531 whales' bones, found in an empty hut near the *Tchukotſkoi* Noſs,
made of different links as ſmooth as if they had been turned, about a foot and a half long, and formed out of one tooth. It is very extraordinary that any of theſe wild people ſhould with nothing but ſtone inſtruments have been capable of making ſo curious a piece of workmanſhip, which was worthy of the beſt artiſt.

501 They have two methods of making their boats; one ſort of
171 which is called *koaihtahta*, and the other *tahta*. The former do
not differ from our fiſhermens' boats, except that the prow and ſtern are higher, and the ſides lower. The tahta has the prow and ſtern of an equal height; the middle is not bent out, but rather falls in, which makes it very inconvenient, eſpecially when there is any wind, as being very ſoon filled with water. They uſe the koaihtahta only upon the river *Kamtſchatka*, but the tahta in moſt other places. When any planks are ſewed upon the tahta they are called baidars, which are uſed by the inhabitants upon the *Bobrovoi* or Beaver ſea in purſuing the ſea animals. They ſplit theſe baidars, and ſewing them with whales' beards caulk them with moſs or nettles beat ſoft. The *Kuriles* of the iſlands and thoſe that live upon the *Lopatka* build the baidars with a keel, to which they ſew planks with whales' beard, and caulk them with moſs. In *Kamtſchatka* they make their boats of poplar wood only; but the *Kuriles*, having no proper wood of their own, are obliged to make uſe of what is thrown on ſhore by the ſea, and which is ſuppoſed to come from the coaſt of *Japan*, *America*, or *China*. The northern inhabitants of *Kamtſchatka*, the

the ſettled *Koreki* and *Tchukotſkoi*, for want of proper timber and plank, make their baidars of the ſkins of ſea animals. 171 501

Theſe boats hold two perſons, one of which ſits in the prow and the other in the ſtern. They puſh them againſt the ſtream with poles, which is attended with great trouble: when the current is ſtrong they can ſcarcely advance two feet in ten minutes; notwithſtanding which, they will carry theſe boats full loaded ſometimes 20 verſts, and, when the ſtream is not very ſtrong, even 30 or 40 verſts.

In the larger boats they can carry 30 or 40 pood; and when the goods are not very heavy, they lay them upon a float or bridge made between two boats joined together. They uſe this method in tranſporting their proviſions down with the ſtream, and alſo to and from the iſlands.

CHAP. VI.

Of the LABOUR *appropriated to the* DIFFERENT SEXES. 221 462

IN the ſummer-time the men are employed in catching, drying, and tranſporting fiſh to their habitations; in preparing bones and ſour fiſh to feed their dogs: the women, in cleaning the fiſh, and ſpreading it out to dry; and ſometimes they go a fiſhing with their huſbands. After their fiſhing is over, they gather in the herbs, roots, and berries, both for food and medicine.

In the harveſt the men catch the fiſh that appear at that time, and kill fowl, ſuch as geeſe, ducks, ſwans, and the like; they teach their dogs to draw carriages, and prepare wood for their

221 ſledges, and other uſes. The women at this time are buſy with
462 their hemp of nettles, in pulling it up, watering, breaking, peel-
ing, and laying it up in their balagans.

The men in the winter hunt for ſables and foxes, weave fiſhing nets, make ſledges, fetch wood, and bring their proviſions from ſeveral places, which they had prepared in the ſummer, and could not bring home in the harveſt. The women are principally employed in ſpinning thread for nets.

In the ſpring, when the rivers begin to thaw, the fiſh that wintered in them go towards the ſea; and the men are buſied in catching them or the ſea animals that at this time frequent the bays. The people upon the Eaſtern Ocean catch the ſea beaver.
462 All the women go into the fields, where they gather wild garlick,
221 and other young tender herbs, which they uſe not only in a ſcar-
262 city of other proviſion, which often happens at this ſeaſon of the
year, but likewiſe out of luxury; for ſo fond are they of every thing that is green, that during the whole ſpring they are ſeldom without having ſome of it in their mouths; and though they always bring home a great bundle of greens, they ſeldom laſt them above a day.

462 Beſides the above-mentioned employments the men are obliged to build their huts and balagans, to heat their huts, dreſs victuals, feed their dogs, flea the animals, whoſe ſkins are uſed in cloathing, and provide all houſhold and warlike inſtruments: the women are here the only taylors and ſhoemakers, for they dreſs the ſkins, make the cloaths, ſhoes, and ſtockings: it is even a diſgrace for the men to do any thing of that ſort; ſo that they looked upon the *Ruſſians* who came here firſt in a very ridiculous light, when they ſaw them uſe either their needle or awl. The women are likewiſe employed in dying ſkins, in conjuration, and
281 curing of the ſick. Their method of preparing and dying ſkins,
ſewing and joining them, is as follows: every ſkin which they uſe

uſe for cloaths, ſuch as deer-ſkins, ſeals, dogs, and beavers, they 281
prepare one way: in the firſt place, wetting and ſpreading it out,
they ſcrape off all the pieces of fat or veins that remained after
fleaing it, with ſtones fixed in pieces of wood; then rubbing it
over with freſh or ſour caviar, they roll it up and tread it with
their feet 'till the hide begins to ſtink; they again ſcrape and
clean it, and continue this 'till the ſkin is ſoft and clean. Such
ſkins as they want to prepare without the hair they uſe at firſt
in the ſame manner as above; then hang them in the ſmoke for
a week, and afterwards ſoak them in warm water to make the
hair fall off; at laſt rubbing them with caviar, by frequent
treading and ſcraping them with ſtones, they make them clean
and ſoft.

They dye the deer and dog ſkins, which they uſe for cloathing, 281
with alder bark cut and rubbed very ſmall; but the ſeal-ſkins, 386
which they uſe either for cloathing, ſhoes, or ſtraps for binding
their ſledges, they dye in a particular manner: having firſt cleaned
off the hair they make a bag of the ſkin, and turning the hair
ſide outward they pour into it a ſtrong decoction of alder bark;
after it has lain thus ſometime, they hang it upon a tree, and beat
it with a ſtick. This operation they repeat 'till the colour is gone
quite through the ſkin; then they rip it open, and ſtretching it out,
dry it in the air; at laſt they rub it 'till it becomes ſoft and fit
for uſe. Such ſkins are not unlike dreſſed goat-ſkins: however,
Steller ſays that the *Lamuſbki* have yet a better way of preparing
them. Theſe ſkins they call *mandari*, and they are worth three
ſhillings a-piece. The hair of the ſeals, with which they ornament
their cloaths and ſhoes, is dyed with the juice of the red
wortleberry boiled with alder bark, alum, and lac lunæ; which
makes a very bright colour. They uſed to ſew their cloaths and 294
ſhoes with needles made of bone, and inſtead of thread they made 412
uſe of the fibres of the deer, which they ſplit to the ſize or 293
thickneſs required.

They

38/ They make glue of the dried ſkins of fiſhes, and particularly of the whale-ſkin. A piece of this they wrap up in birch bark, and laying it for a little while in warm aſhes they take it out; and it is then fit for uſe, and to me ſeems as good as the beſt *Yaick* glue.

CHAP. VII.

Of their DRESS.

29/ THEIR cloaths, for the moſt part, are made of the ſkins of deer, dogs, ſeveral ſea and land animals, and even of the ſkins of birds, frequently joining thoſe of different animals in the ſame garment. They make the upper garment in two faſhions; ſometimes cutting the ſkirts all of an equal length; and ſometimes leaving them long behind in form of a train. They are made of deer-ſkins, with wide ſleeves of a length to come down below the knee: there is a hood or caul behind, which in bad weather they put over their heads below their caps: the opening above is only large enough to let their head paſs: they ſew the ſkins of dog's feet round this opening, with which they cover their faces in cold ſtormy weather, and round their ſkirts and ſleeves they put a border of white dog-ſkin: upon their backs they ſew the ſmall ſhreds of ſkins or ſilk of different colours. They commonly wear two coats; the under coat with the hair-ſide inwards, the other ſide being dyed with alder; and the upper with the hair outwards. For the upper garment they chooſe black, white, or ſpeckled ſkins, the hair of which is moſt eſteemed for the beauty of its colours.

Men and women, without diſtinction, uſe the above-mentioned garments, their dreſs only differing in their under cloathing, and in

the covering of their feet and legs. The women have an undergarment 291
which they commonly wear at home in the houſe, conſiſting
of breeches and waiſtcoat ſewed together. The breeches
are wide, like thoſe of the *Dutch* ſkippers, and tie below the knee;
the waiſtcoat is wide above, and drawn round with a ſtring.
The ſummer habits are made of dreſſed ſkins without hair; their
winter garment is made of deer or ſtone-ram ſkins with the
hair on. The undreſs or houſhold habit of the men is a girdle
of leather, with a bag before, and likewiſe a leathern apron to
cover them behind: theſe girdles are ſewed with hair of different
colours. The *Kamtſchadales* uſed formerly to go a hunting and 291
fiſhing during the ſummer in this dreſs; but now this faſhion is 177
changed, and below their girdles they wear linen ſhirts, which
they buy from the *Ruſſians*.

The covering of their feet and legs is made of ſkins of different 291
ſorts; in the ſummer time during the rains, they wear the ſkins
of ſeals with the hair outwards; but their moſt common covering
is the ſkin of the legs of the rein-deer, and ſometimes of
the legs of other beaſts, the ſhaggieſt they can find, to preſerve
them againſt the cold. But the fineſt buſkins, which both the 292
Coſſacks and *Kamtſchadales* uſe in their greateſt dreſs, are made 584
in the following manner: the ſole is of white ſeal-ſkin, the upper
part of fine dyed leather, the hind quarters of white dog-ſkin;
what comes round the legs is of dreſſed leather or dyed ſealſkins:
the upper parts are embroidered. Theſe buſkins are ſo
extraordinary, that if a batchelor is obſerved to wear them he is
immediately concluded to be upon a ſcheme of courtſhip.

They wear the ſame ſort of caps as the people of *Jakutſki*. 291
In the ſummer they have a ſort of hats of birch bark tied about 171
their head: the *Kuriles* uſe in the ſummer time caps made of
platted graſs. The women's head-dreſs is the perukes that we 302
formerly mentioned; and theſe were ſo dear to them, that when 177
they

302 they came to be Chriſtians they were with difficulty prevailed
177 upon to quit this dreſs for one more decent: however, at preſent
291 round the *Ruſs* ſettlements all is intirely changed, the women
wearing ſhirts, ruffles, waiſtcoats, caps and ribbands; which change nobody now complains of, except the very old people. The women do all their work in mittins: they formerly never waſhed their faces, but now they uſe both white and red paint; for white paint they make uſe of a rotten wood, and for red a ſea plant *, which they boil in ſeals' fat, and rubbing their cheeks with it make them very red. They dreſs moſt in the winter time, eſpecially when they either receive or pay viſits.

435 The common cloaths for a *Kamtſchadale* and his family will not coſt him leſs than an hundred rubles, for the coarſeſt worſted ſtockings, which coſt in *Ruſſia* 20 kopeeks, cannot be bought here for leſs than a ruble; and all other things are ſold in the ſame proportion. The *Kuriles* are more able to buy good cloaths than the *Kamtſchadales*, for they can purchaſe for one ſea beaver as much as the *Kamtſchadales* can for twenty foxes, and one beaver coſts the *Kuriles* no more trouble than five foxes do the *Kamtſchadales*; for he muſt be a good hunter who catches more than ten foxes in the winter, and a *Kurili* thinks himſelf unlucky if he doth not catch three beavers in the ſeaſon; beſides which great numbers are thrown upon the ſhore by ſtorms,

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* Fucus marinus abietis forma. Pinus maritima, ſeu fucus teres. Dood. Append. 326. Ray Linn.

CHAP. VIII.

Of their DIET *and* LIQUORS, *together with their Method of* COOKING. 262

HAVING already mentioned that the food of the *Kamtſchadales* conſiſts in roots, fiſh, and ſea animals, which are all deſcribed in the ſecond part of this book, we ſhall now relate their method of dreſſing them. And firſt, we will begin with the fiſh, which they uſe inſtead of bread. The principal food, called *yokola*, is prepared from 252 every ſort of fiſh, and ſerves them for houſhold bread. They 262 divide their fiſh into ſix parts; the ſides and tail are hung up to dry; the back and thinner part of the belly are prepared apart, and generally dried over the fire; the head is laid to ſour in pits, and then they eat it like ſalt fiſh, and eſteem it much, though the ſtink is ſuch that a ſtranger cannot bear it; the ribs and the fleſh which remain upon them they hang up and dry, and afterwards pound them for uſe; the larger bones they likewiſe dry for food for their dogs: in this manner all theſe different people prepare the *yokola*, and they eat it for the moſt part dry.

Their ſecond favourite food is caviar, or the roes of fiſh, which they prepare in three different ways: they dry the roe whole in the air, or take it out of the ſkin which envelopes it, and, ſpreading it upon a bed of graſs, dry it before the fire; or laſtly, make rolls of it with the leaves of graſs, which they alſo dry. They never take a journey or go a hunting without 262 dry caviar; and if a *Kamtſchadale* has a pound of this, he can ſubſiſt without any other proviſion a great while; for every birch and alder tree furniſhes him with bark, which, with his

262 dried caviar, makes him an agreeable meal; but they cannot eat either ſeparately, for the caviar ſticks like glue to the teeth, and the bark, although it ſhould be chewed ever ſo long by itſelf, they are hardly ever able to ſwallow down alone. There is ſtill 252 a fourth method which both the *Kamtſchadales* and *Koreki* uſe 171 in preparing their caviar; having covered the bottom of a pit with graſs, they throw the freſh caviar into it, and leave it there to grow ſour: the *Koreki* tie their's in bags and leave it to ſour; this is eſteemed their moſt delicate diſh.

252 There is a third ſort of diet, called by the *Kamtſchadales* 262 *tchupriki*, which is prepared in this manner: in their huts over the fire-place they make a bridge of ſtakes, upon which they lay a heap of fiſh, which remains there 'till the hut becomes as warm as a bagnio; if there was no great thickneſs of fiſh one fire would ſerve to dreſs it; but ſometimes they are obliged to make two, three, or more fires. Fiſh dreſſed in this manner is half roaſted, half ſmoaked, and has a very agreeable taſte, and may be reckoned the beſt of all the *Kamtſchatka* cookery; for the whole juice and fat is prepared with a gradual heat, and kept in by the skin, in which it lies as in a bag, and when ready may be eaſily ſeparated from the fiſh; as ſoon as it is thus dreſſed, they take out the guts, and ſpread the body upon a mat to dry; this they afterwards break ſmall and put into bags, carrying it along with them for proviſion; and when dried eat it like the *yokola*.

252 The *Kamtſchadales* have a diſh, which they eſteem very 262 much, called *huigul*: it is fiſh laid to grow ſour in pits; and 171 though the ſmell of it is intollerable, yet the *Kamtſchadales* eſteem it a perfume. This fiſh ſometimes rots ſo much in the pits that they cannot take it out without ladles; however in that caſe they uſe it for feeding their dogs.

Mr. *Steller* ſays, that the ſummer *Samojeds* likewiſe ſour their fiſh; but that the earth being frozen preſerves it much

better; the *Jakutſki* alſo dig deep pits, in which they lay their 252
fiſh, ſprinkling it with wood aſhes, and cover it with leaves at 262
top, and over all put a layer of earth: this method is better 171
than any of the former. The *Tunguſi* and Coſſacks of *Ochotſka* preſerve their fiſh in the ſame manner, with this difference only, that inſtead of wood aſhes, they uſe the aſhes of burnt ſea weed. They boil their freſh fiſh in troughs, take it out with boards, and letting it cool, eat it with a ſoup made of the ſweet graſs.

As for the fleſh of land and ſea animals, they boil it in their 252
troughs, with ſeveral different herbs and roots; the broth they 264
drink out of ladles and bowls, and the meat they take out upon boards, and eat in their hands. The whale and ſea horſe fat they alſo boil with roots.

There is a principal diſh at all their feaſts and entertainments, 262
called *ſelaga*, which they make by pounding all ſorts of different roots and berries, with the addition of caviar, and whale and ſeals' fat.

Before the conqueſt they ſeldom uſed any thing for drink 273
but water: but when they made merry they drank water 177
which had ſtood ſome time upon muſhrooms; but of this hereafter. At preſent they drink ſpirits as faſt as the *Ruſſians*: after dinner they drink water; and every one, when he goes to bed at night, ſets a veſſel of water by him, to which he puts ſnow or ice to keep it cold; and always drinks it up before
morning. In the winter time they amuſe themſelves frequently 271
by throwing handfuls of ſnow into their mouths; and 583
the bridegrooms who work with the fathers of their future brides 524
find it their hardeſt task to provide ſnow for their family in the ſummer time, for they muſt bring it from the higheſt hills be the weather what it will, otherwiſe they would ſo diſoblige as never to be forgiven.

CHAP. IX.

231 *The Method of* TRAVELLING *with* DOGS, *and the* FURNITURE *neceſſary thereto.*

THE Dogs of *Kamtſchatka* differ very little from the common houſe dogs: they are of a middling ſize, of various colours, though there ſeem to be more white, 492 black, and grey, than of any other. In travelling they make uſe of thoſe that are gelded, and generally yoke four to a ſledge.

The alaki is made of broad double ſoft ſtraps, which are put over the dogs' ſhoulders, the near dog having it over his left, and the off dog over his right. At the end of theſe alaki's is a ſmall thong, with a hook at the end of it, which is faſtened to a ring in the fore part of the ſledge.

The pobeſhnick is a long ſtrap, and ſerves inſtead of a coach pole. It paſſes through a ring, which is in the middle of the fore part of the ſledge; and to it is faſtened a chain that keeps the dogs together, that they ſhould not run aſunder.

The bridle is a long ſtrap, with a hook and chain, which is fixed to the fore dogs, and is much longer than the pobeſhnick, being faſtened to a ring in the fore part of the ſledge.

The oſheiniki, or collars, are broad ſtraps made of bear-skin, and are frequently put upon dogs merely for ornament.

They drive and direct their dogs with a crooked ſtick about four feet long, which they call the oſtal, and ſometimes adorn it with different coloured thongs: this is looked upon as a great 493 piece of finery. They drive their ſledges ſitting upon the right ſide with their feet hanging down; and it would be looked upon as a diſgrace for any one to ſit in the ſledge, or to make uſe of any perſon to drive them, no body doing this but the women. 493

A ſet of four good dogs will coſt in *Kamtſchatka* 15 rubles, and with their harneſs complete come to near 20. 492

485

From the make of their ſledges may be ſeen how difficult it is to travel upon them; for a man is obliged to keep the exacteſt balance, otherwiſe he is liable, from the height and narrowneſs of them, to be overturned. In a rugged road this would be very dangerous, as the dogs never ſtop 'till they come to ſome houſe, or are entangled by ſomething upon the road; for they have this fault, that in going down ſteep hills they run with all their force, and are ſcarcely to be kept in: for which reaſon, in deſcending any great declivity they unyoke all the dogs except one, and lead them ſoftly down the hill. They likewiſe walk up hills; for it is as much as the dogs can do to drag up the ſledge empty. The narta will carry, beſides the proviſions for the dogs and the driver, about five poods. With this load, upon a tolerable road, they can travel about 30 verſts a day; and without any load, in the ſpring when the ſnow is hardened, and upon ſliders made of bone, they can travel 150 verſts. After a deep ſnow there is no travelling with dogs 'till a road be made, which is effected by a man going before upon ſnow-ſhoes, whom they call *brodovſhika*. 491 481

The ſnow-ſhoes are made of two thin boards, ſeparated in the middle, and bound together at the ends; the fore part is bent a little upwards. They are bound together with thongs, and a place made to ſlip in the foot, which they likewiſe tie with thongs. The brodovſhika having one of theſe ſhoes upon each foot leaves the dogs and ſledge, and going on, clears the road for ſome way; then returning leads forwards the dogs and ſledge ſo far as the road is made; a method which he muſt continue 491 484

'till

484 'till he comes to ſome dwelling-houſe. This is very laborious,
491 but it happens ſo often, that no guide ever ſets out without his ſnow-ſhoes.

484 The greateſt danger is when a ſtorm of driven ſnow ſurpriſes them; then they are obliged with all haſte to ſeek the ſhelter of ſome wood, where they ſtay as long as the tempeſt laſts, which ſometimes is a whole week. If a ſtorm at any time ſurpriſes a large company of travellers, they dig a place for themſelves under the ſnow, and cover the entry with wood or bramble. The *Kamtſchadales* ſeldom make theſe temporary huts, but hide themſelves commonly in caves or holes of the earth, wrapping themſelves in their furrs; and when thus covered, they move or turn themſelves with the greateſt caution, leaſt they ſhould throw off the ſnow, for under that they lie as warm as in their common huts: they muſt only have the convenience of a breathing place; but if their cloaths are tight or hard girt about them, the cold is unſufferable.

If the ſtorms ſurpriſe them in an open country where there is no wood, they endeavour to find ſome hollow place, in which they ſhelter themſelves, but muſt be careful to prevent being ſmothered with the ſnow. The eaſt and ſouth-eaſt winds are generally attended with a moiſt ſnow, which wets the travellers; and being followed with the north wind and ſevere colds, ſeveral are then frozen to death.

Another danger attending the traveller is, that in the ſevereſt froſt ſeveral rivers are not quite frozen over; and as the roads for the moſt part lie cloſe upon the rivers, the banks being very ſteep, few years paſs in which many people are not drowned. A diſagreeable circumſtance alſo to thoſe who travel in theſe parts is their ſometimes being obliged to paſs through copſes, where they run the riſk of having their eyes ſcratched out, or their limbs broken; for the dogs always run moſt violently in

the worſt roads, and to free themſelves very often overturn 484
their driver.

The beſt travelling is in the month of *March* or *April*, when 484
the ſnow is turned hard or frozen a little at top; however, there 147
is ſtill this inconvenience attending it, that ſometimes travellers
are obliged to lodge two or three nights in deſert places; and it
is difficult to prevail upon the *Kamtſchadales* to make fire either
for warming themſelves or dreſſing victuals, as they and their
dogs eat dried fiſh, and find themſelves ſo warm wrapt in their
furrs that they want none; nay, it is ſurpriſing to ſee all the 513
people of this climate bearing the cold ſo well, that after having 147
ſlept a whole night very ſound they awake next morning as
refreſhed and alert as if they had lain in the warmeſt bed. This
ſeems to be ſo natural to all here, that I have ſeen ſome of
them lie down with their backs uncovered againſt a fire, and
notwithſtanding the fire has been burnt out long before morning,
yet they continued to ſleep on very comfortably, and without
any inconvenience.

CHAP. X.

Of the Kamtſchadales' *Method of making* WAR. 721

ALTHOUGH before they were conquered by the *Ruſſians*, the *Kamtſchadales* did not ſeem to have had any ambition of increaſing their power, or enlarging their territories, yet they had ſuch frequent quarrels among themſelves that ſeldom a year paſſed without one village or other being entirely ruined. The end of their wars was to take priſoners, in

721 order to employ them, if males, in their hardeſt labour, or, if females, either for wives or concubines; and ſometimes the neighbouring villages went to war for quarrels that happened among the children; or for neglecting to invite each other to their entertainments.

726 Their wars are carried on more by ſtratagem than bravery; for
703 they are ſuch cowards that they will not openly attack any one unleſs forced by neceſſity: this is the more extraordinary, becauſe no people ſeem to deſpiſe life more than they do, ſelf-murther being here very frequent. Their manner of attacking is this: in the night-time they ſteal into the enemy's village, and ſurpriſe them, which may eaſily be done as they keep no watch; thus a ſmall party may deſtroy a large village, as they have nothing more to do than to ſecure the mouth of a hut, and ſuffer no body to come out, which only one can do at a time; therefore whoever firſt attempts to eſcape is knocked down, or obliged to ſubmit to be bound.

727 The male priſoners which they take, eſpecially if they are men of any conſequence, are treated with all manner of barbarity, ſuch as burning, hewing them to pieces, tearing their entrails out when alive, and hanging them by the feet. This has been the fate of ſeveral *Ruſſian* Coſſacks during the diſturbances of *Kamtſchatka*; and theſe barbarities are exerciſed with great ſhew of triumph and rejoicing.

619 Theſe private differences among themſelves were very uſeful
609 to the Coſſacks in their conqueſt of the whole nation; for
186 when the natives ſaw the latter attacking one village, ſo far were they from aſſiſting their countrymen, that they rejoiced at their deſtruction, not conſidering that the ſame was to be their
726 fate next.

R. In their wars with the Coſſacks, they deſtroyed more by
177 ſtratagem than by arms; for when the Coſſacks came to any
.72 village

village to demand their tribute, they were received with all 726
marks of friendſhip, and not only the tribute was paid, R.
but likewiſe great preſents were made them. Thus the 177
natives having lulled them into a ſtate of ſecurity, they .72
either cut their throats in the night-time, or ſet fire to their huts, and burnt them with all the Coſſacks which were within. By ſuch ſtratagems 70 people were deſtroyed in two places, which, conſidering the ſmall number of Coſſacks that were there, was a very conſiderable loſs: nay, it has ſometimes happened that when they had no opportunity of deſtroying the Coſſacks at firſt, they have for two years quietly paid the tribute, waiting 'till they could find an opportunity of doing it.

By this cunning the *Kamtſchadales* deſtroyed at firſt many Coſſacks, but now the latter are more upon their guard, and are particularly afraid of extraordinary careſſes, always expecting ſome bad intention when the women in the night-time retire out of their huts. When the *Kamtſchadales* pretend to have dreamed of dead people, or go to viſit diſtant villages, there is reaſon to dread a general inſurrection.

When this happens, they kill all the Coſſacks which fall in 726
their way, and even the *Kamtſchadales* who will not join in 762
the rebellion. As ſoon as they hear that troops are coming R.
againſt them, inſtead of going to oppoſe their enemies, they 177
retire to ſome high place, which they fortify as ſtrongly as .72
they can, and building huts there, wait 'till they are attacked, and then they bravely defend themſelves with their bows and arrows, and every other method they can think of; but if they obſerve, that the enemy is likely to make themſelves maſters of the fortreſs, they firſt cut the throats of their wives and children, and afterwards either throw themſelves down the precipice, or with their arms ruſh in upon their enemies that they

726 may not dye unrevenged: this they call making a bed for themſelves.
762 In the year 1740, a girl was brought from *Utkolok*
whom the rebels in their hurry neglected to kill; the reſt were all murthered, and the rebels threw themſelves from the hill, upon which they were fortified, into the ſea.

669 From the time that *Kamtſchatſka* was ſubdued, there have
726 been only two rebellions which could be properly called ſo. The
175 firſt happened in the year 1710, in *Bolſcheretſkoi Oſtrog*; and
R. the other in the year 1713 upon the river *Awatſcha*. Both
177 of them were, however, unfortunate for the authors. In the
.72 firſt, great numbers beſieged the *Bolcheretſkoi* fort, in which were
only 70 Coſſacks, 35 of whom making a ſally put them all to flight, and in endeavouring to reach their boats which brought them thither, in the hurry ſuch numbers were drowned that the river was almoſt choaked up by their dead bodies. The rebels upon the *Awatſcha* thought themſelves ſo ſure of deſtroying the *Ruſſians* that they brought thongs to bind them; however the rebels were either all killed or taken priſoners.

411 Their arms are bows and arrows, ſpears, and a coat of mail: their quivers are made of the wood of the larch-tree, glued round with birch-bark; their bow-ſtrings of the blood veſſels of the whale; and their arrows are commonly about four feet long, pointed with flint ſtones, or bone; and though they are but indifferent, yet they are very dangerous, being all poiſoned, ſo that a perſon wounded by them generally dies in twenty-four hours, unleſs the poiſon be ſucked out, which is the only remedy known. Their ſpears are likewiſe pointed with flint or bone; and their coats of mail are made of mats, or of the ſkins of ſeals and ſea horſes, which they cut out into thongs, and plait together. They put them on upon the left ſide, and tie them with thongs upon the right; behind is fixed a high board to defend their head, and another before to guard the breaſt.

When they march on foot it is remarkable that two never 481
go a-breaſt, but follow one another in the ſame path, which by uſe becomes very deep and narrow; ſo that it is almoſt impoſſible for one that is not uſed to it to walk therein, for theſe people always ſet one foot ſtrait before the other in walking.[1]

[Chapters XI-XIV of this source are a summary (and a distorted one) rather than an actual translation of the original Russian. For a complete translation see Kamchadal Source 2]

CHAP. XI.

The Opinions of the Kamtſchadales *concerning* God, *the Formation of the World, and other Articles of Religion.* 776

THE *Kamtſchadales*, like other barbarous nations, have no notions of a deity, but what are abſurd, ridiculous, and ſhocking to a humanized mind. They call their god *Kutchu*, but they pay him no religious worſhip, and the only uſe they make of his name is to divert themſelves with it; they relate ſuch ſcandalous ſtories of him as one would be aſhamed to repeat. Amongſt other things they reproach him with having made ſo many ſteep hills, ſo many ſmall and rapid rivers, ſo much rain, and ſo many ſtorms; and in all the troubles that happen to them upbraid and blaſpheme him.

They place a pillar upon a large wide plain, which they bind 778
round with rags. Whenever they paſs this pillar they throw a 782
piece of fiſh or ſome other victuals to it; and near it they never 886
gather any berries, or kill any beaſts or birds. This offering they think preſerves their lives, which otherwiſe would be ſhortened: however, they offer nothing which can be of uſe to themſelves, but only the fins and tails of the fiſh, or ſuch things as they would be obliged to throw away. In this all theſe people of *Aſia* agree, offering only ſuch things as are uſeleſs to themſelves.

778 Beſides theſe pillars ſeveral other places are reckoned ſacred, ſuch
776 as burning and ſmoaking mountains, hot ſprings, and ſome particular
woods, which they imagine are inhabited by devils, whom
they fear and reverence more than their gods.

771 All their opinions concerning both gods and devils are certainly
825 very ſimple and ridiculous; however, it ſhews that they endeavour
to give an account for the exiſtence of every thing as
far as they are able; and ſome of them try to penetrate into
the thoughts of the very birds and fiſhes; but when once any
opinion is eſtabliſhed, they never trouble themſelves with enquiring
whether the thing be poſſible or not. Hence their
religion entirely depends upon ancient tradition, which they
777 believe without examination. They have no notion of a
ſupreme Being that influences their happineſs or miſery, but
hold that every man's good or bad fortune depends upon
775 himſelf. The world they believe is eternal, the ſoul immortal,
and that it ſhall be again joined to the body, and live eternally
ſubject to the ſame fatigues and troubles as in this preſent life,
with this difference only, that they ſhall have greater plenty of
all the neceſſaries of life: even the very ſmalleſt animals they
772 imagine will riſe again, and dwell under the earth. They think
the earth is flat, and that under it there is a firmament like
our's; and under that firmament another earth like our's, in
which when we have ſummer they have winter, and when we
775 have winter they have ſummer. With regard to future rewards
and puniſhments, they believe that in the other world the rich
will be poor and the poor will be rich.

577 Their notions of vice and virtue are as extraordinary as thoſe
they entertain of God. They believe every thing lawful that
procures them the ſatisfaction of their wiſhes and paſſions, and
think that only to be a ſin from which they apprehend danger or
ruin; ſo that they neither reckon murder, ſelf-murder, adultery,
oppreſſion, nor the like, any wickedneſs: on the contrary,
they

they look upon it to be a mortal ſin to ſave any one that is 577
drowning, becauſe, according to their notions, whoever ſaves 784
him will be ſoon drowned himſelf. They reckon it likewiſe a
ſin to bathe in, or to drink, hot water, or to go up to the
burning mountains. They have beſides theſe innumerable abſurd
cuſtoms, ſuch as ſcraping the ſnow from their feet with a knife,
or whetting their hatchets upon the road. This may, however,
be ſaid, that they are not the only people who have ridiculous
ſuperſtitions.

Beſides the above-mentioned gods they pay a religious regard 825
to ſeveral animals, from which they apprehend danger. They
offer fire at the holes of the ſables and foxes; when fiſhing,
they intreat the whales or ſea horſes not to overturn their boats;
and in hunting, beſeech the bears and wolves not to hurt them.
This was the ſtate of theſe people the firſt years of my being 797
amongſt them; but now, by the care of the Empreſs *Elizabeth*, R.
miſſionaries are appointed to inſtruct them in the Chriſtian faith. 177
In 1741 a Clergyman was ſent by the ſynod with aſſiſtants and .79
every thing neceſſary for building a church, and inſtructing this
wild people; which has been attended with ſuch ſucceſs, that not
only many of them are baptized, but ſchools are alſo erected in
ſeveral places, to which the *Kamtſchadales* very readily ſend
their children: ſo that in a few years we may hope to ſee the
Chriſtian faith planted in all theſe northern countries.

CHAP.

CHAP. XII.

756
791

Of their SHAMANS, *or Conjurers.*

THE *Kamtſchadales* have none who are profeſſed *Shamans*, or conjurers, as the neighbouring nations have; but every old woman is looked upon as a witch and an interpreter of dreams. In their conjurations they whiſper upon the fins of fiſhes, the ſweet graſs, and ſome other things; by which means they cure diſeaſes, divert misfortunes, and foretel futurity.

787 They are very great obſervers of dreams, which they relate to one another as ſoon as they awake in the morning, and judge from thence of their future good or bad fortune; and ſome of theſe dreams have their interpretation fixed and ſettled. Beſides this conjuration they pretend to chiromancy, and to foretel a man's good or bad fortune by the lines of his hand; but the rules which they follow are kept a great ſecret.

CHAP. XIII.

796

Of their CEREMONIES.

THE *Kamtſchadales* always celebrated three days in the month of *November*, which is hence called the month of Purification. *Steller* imagines, that this was firſt inſtituted by their anceſtors to return thanks to God for all his bleſſings; but that afterwards, through the ſtupidity of theſe

796 people, it has been perverted by fooliſh and ridiculous ceremonies; and this appears the more probable, becauſe that, after their ſummer or harveſt labour is over, they look upon it as a ſin to do any work, or make any viſits, before this holiday, which if any one neglects he is obliged to expiate it at that time, if not before. From hence we may ſee that the anceſtors of this people were accuſtomed to offer up the firſt fruits of their ſummer labours to God, and to make merry with one another. The northern and ſouthern *Kamtſchadales* have different ceremonies in the celebration of their holidays, which are extremely ſilly, and conſiſt of many ridiculous anticks. I ſhall give a ſlight ſketch of one of theſe aſſemblies in the ſouthern *Kamtſchatka*.

After many ſtrange ceremonies they introduce a little bird and a fiſh, which they roaſt upon the coals, and divide amongſt them, when every one throws his ſhare into the fire as a ſacrifice, or an offering, to thoſe ſpirits which come to their feaſts; then they boil dried fiſh, the broth of which they pour out before their image, and eat the fiſh themſelves; and then take the birch-tree out of the hut, and carrying it to their magazines, lay it up there to be kept for the whole year. Thus ends the feſtival.

CHAP. XIV.

Of their FEASTS *and* DIVERSIONS. 527 574

THEY make feaſts when one village entertains another,
either upon the account of a wedding, or having had a
plentiful fiſhing or hunting. The landlords entertain their 273
gueſts with great bowls of opanga, 'till they are all ſet a vomiting;

273 ing; ſometimes they uſe a liquor made of a large muſhroon, with which the *Ruſſians* kill flies. This they prepare with the juice of epilobium, or *French* willow.

The firſt ſymptom of a man's being affected with this liquor is a trembling in all his joints, and in half an hour he begins to rave as if in a fever; and is either merry or melancholy mad, according to his peculiar conſtitution. Some jump, dance, and ſing; others weep, and are in terrible agonies, a ſmall hole appearing to them as a great pit, and a ſpoonful of water as a lake: but this is to be underſtood of thoſe who uſe it to exceſs; for taken in a ſmall quantity it raiſes their ſpirits, and makes them briſk, courageous, and chearful.

276 It is obſerved, whenever they have eaten of this plant, they
824 maintain that, whatever fooliſh things they did, they only obeyed
828 the commands of the muſhroon: however, the uſe of it is
certainly ſo dangerous, that unleſs they were well looked after
it would be the deſtruction of numbers of them. The *Kamtſchadales* do not much care to relate theſe drunken frolicks, and
perhaps the continual uſe of it renders it leſs dangerous to them.
One of our Coſſacks reſolved to eat of this muſhroon in order
to ſurpriſe his comrades; and this he actually did, but it was
with great difficulty they preſerved his life. Another of the
inhabitants of *Kamtſchatka*, by the uſe of this muſhroon, imagined that he was upon the brink of hell ready to be thrown
in, and that the muſhroon ordered him to fall upon his knees,
and make a full confeſſion of all the ſins he could remember,
which he did before a great number of his comrades, to their
no ſmall diverſion. It is related, that a ſoldier of the garriſon having eaten a little of this muſhroon, walked a great
way without any fatigue, but at laſt, having taken too great
276 a quantity, he died. My interpreter drank ſome of this
juice without knowing of it, and became ſo mad, that it
was with difficulty that we kept him from ripping open
his

his belly, being, as he ſaid, ordered to do it by the muſhroon. 276

The *Kamtſchadales* and the *Koreki* eat of it when they reſolve 276 to murder any body; and it is in ſuch eſteem among the *Koreki*, 439 that they do not allow any one that is drunk with it to make water upon the ground, but they give him a veſſel to ſave his urine in, which they drink, and it has the ſame effect as the muſhroon itſelf. None of this muſhroon grows in their country, ſo that they are obliged to purchaſe it of the *Kamtſchadales*. Three or four of them are a moderate doſe, but when they want to get drunk they take ten.

The women never uſe it; ſo that all their merriment conſiſts 535 in jeſting, dancing, and ſinging. Their dance is in this manner: The two women that are to dance ſpread a mat in the middle of the room, and kneel down upon it oppoſite to one another, having a little tow in each hand. At firſt they begin to ſing very low, moving a little their hands and ſhoulders; by degrees they raiſe their voice, and encreaſe the motions of their bodies, 'till they are quite out of breath and fatigued. This ſtrange, uncouth entertainment, as it appeared to me, ſeemed greatly to delight the *Kamtſchadales*: ſo ſtrongly is every nation prejudiced in favour of its own cuſtoms.

In their love-ſongs they declare their paſſion to their lovers, 533 their grief, hope, and other affections. The women generally compoſe them, and have clear, agreeable voices. Though they 534 do not want an inclination for muſick, yet they have no muſical inſtrument, except a ſimple flute, and upon that they cannot play any tune.

Another of their amuſements is mimicking other people in 536 their ſpeaking, walking, and all other actions. Whenever a 512 ſtranger comes to *Kamtſchatka* they give him a new name, and obſerve every thing about him very carefully, which they mimick

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for their diverſion in all their entertainments.

538 for their diverſion in all their entertainments. They ſometimes
522 ſmoke tobacco, and tell ſtories; all which merriments are generally in the night time. They have alſo profeſſed buffoons or jeſters; but their wit is intolerably indecent and obſcene.

CHAP. XV.

574 576 *Of their* FRIENDSHIP, *and* HOSPITALITY

211 WHEN any one of this country ſeeks the friendſhip of another he invites him to his hut, and for his entertainment dreſſes as much of his beſt victuals as might ſerve ten people. As ſoon as the ſtranger comes into the hut, which is made very hot for his reception, both he and the landlord ſtrip themſelves naked: then the latter ſets before his gueſt great plenty of victuals; and while he is eating it the hoſt throws water upon red-hot ſtones, 'till he makes the hut inſupportably hot. The ſtranger endeavours all he can to bear this exceſſive heat, and to eat up all the victuals that were dreſſed; and the landlord endeavours to oblige his friend to complain of the heat, and to beg to be excuſed from eating all up. It is reckoned a diſhonour to the landlord, and a mark of niggardlineſs, if he ſhould be able to accompliſh this. He himſelf eats nothing during the whole time, and is allowed to go out of the hut; but the ſtranger is not ſuffered to ſtir 'till he acknowledges himſelf overcome. At theſe feaſts they over-eat themſelves ſo much, that for three days they cannot bear the
574 ſight of victuals, and are ſcarce able to move, from repletion.

576 When the ſtranger is gorged, and can no longer endure the
431 heat, he purchaſes his diſmiſſion with preſents of dogs, cloaths,

or whatever is agreeable to his landlord; in return for which he receives old rags, and uſeleſs lame curs. This, however, is reckoned no injury, but a proof of friendſhip; and he expects, in turn, to uſe his friend in the ſame manner. And if that man, who has thus plundered his friend, returns not his viſit in proper time, he does not thereby ſave his preſents, for the gueſt pays him a ſecond viſit, at which time he is obliged to make him what preſents he is able; but if, either out of poverty or avarice, he makes him none, it is looked upon as the greateſt affront, and he muſt expect this man always to be his enemy: beſides, it is ſo diſhonourable that no body elſe will ever live in friendſhip with him afterwards. 574 576 431

In their banquets they treat their friends in the ſame manner, only they do not torment them with heat, nor expect any preſents. When they entertain with the fat of ſeals or whales, they cut it out into ſlices; and the landlord kneeling before his company, with one of theſe ſlices in one hand and a knife in the other, thruſts the fat into their mouths, crying in a ſurly tone, *Ta na*, and with his knife he cuts off all that hangs out of their mouths, after they are crammed as full as they can hold. Whoever wants any thing from another may generally obtain it upon theſe occaſions; for it is reckoned diſhonourable for the gueſt to refuſe his generous landlord any thing. An inſtance of this happened, between a *Kamtſchadale* and a newly chriſtened Coſſack, juſt before I arrived, and was then the common ſubject of converſation. The Coſſack, according to the cuſtom of that country, had a *Kamtſchadale* to his friend, who he heard was poſſeſſed of a very fine fox-ſkin, which he greatly deſired, but which the *Kamtſchadale* would by no means part with. The Coſſack invited him to his hut, where he entertained him with vaſt plenty of victuals, and by throwing water upon burning-hot ſtones made the heat of the hut intolerable to his friend the *Kamtſchadale*, 'till at laſt he was obliged to beg for mercy.

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574 This the Coſſack would not grant 'till he had obtained a promiſe of the fine fox-ſkin. It ſhould ſeem, that this entertainment 576 could not be agreeable to the *Kamtſchadale*: however, he ſeemed 431 to be pleaſed with it, and to ſwear that he never thought it poſſible to make ſuch a heat, or that the Coſſacks could entertain their friends with ſo much reſpect; and declared, that though he looked upon his fox-ſkin as an ineſtimable rarity, yet he parted from it with pleaſure on that occaſion, and ſhould always remember the noble entertainment of his friend.

CHAP. XVI.

584 *Of their* COURTSHIP, MARRIAGES, *&c.*

WHEN a *Kamtſchadale* reſolves to marry, he looks about for a bride in ſome of the neighbouring villages, ſeldom in his own; and when he finds one to his mind, he diſcovers his inclination to the parents, deſiring that he may have the liberty of ſerving them for ſome time: this permiſſion he eaſily obtains, and, during his ſervice, he ſhews an uncommon zeal in order to ſatisfy them of what he can do. After having thus ſerved, he deſires liberty to ſeize his bride; and if he has happened to pleaſe the parents, his bride, and her relations, this is preſently granted; but, if they diſapprove of it, they give him ſome ſmall reward for his ſervices, and he departs. It ſometimes happens that theſe bridegrooms, without diſcovering any thing of their intention, engage themſelves in ſervice in ſome ſtrange village; and though every one ſuſpects their deſign, yet no notice is taken of it, 'till either he or his friend declares it.

When a bridegroom obtains the liberty of ſeizing his bride, he ſeeks every opportunity of finding her alone, or in the company of a few people; for during this time all the women in the village are obliged to protect her; beſides ſhe has two or three different coats, and is ſwaddled round with fiſh nets and ſtraps, ſo that ſhe has little more motion that a ſtatue. If the bridegroom happens to find her alone, or in company but with a few, he throws himſelf upon her, and begins to tear off her cloaths, nets, and ſtraps; for to ſtrip the bride naked conſtitutes the ceremony of marriage. This is not always an eaſy taſk; for though ſhe herſelf makes ſmall reſiſtance, (and indeed ſhe can make but little) yet, if there happen to be many women near, they all fall upon the bridegroom without any mercy, beating him, dragging him by the hair, ſcratching his face, and uſing every other method they can think of to prevent him from accompliſhing his deſign. If the bridegroom is ſo happy as to obtain his wiſh, he immediately runs from her, and the bride as a proof of her being conquered, calls him back with a ſoft and tender voice: thus the marriage is concluded. This victory is ſeldom obtained at once, but ſometimes the conteſt laſts a whole year; and after every attempt the bridegroom is obliged to take ſome time to recover ſtrength, and to cure the wounds he has received. There is an inſtance of one, who, after having perſevered for ſeven years, inſtead of obtaining a bride, was rendered quite a cripple, the women having uſed him ſo barbarouſly. 583

As ſoon as the above ceremony is over, he has liberty next night to go to her bed, and the day following, without any ceremony, carries her off to his own village. After ſome time, the bride and bridegroom return to the bride's relations, where the marriage feaſt is celebrated in the following manner; of which I was an eye-witneſs in 1739. 585

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585 The bridegroom, his friends, and his wife, viſited the father-in-law in three boats. All the women were in the boats, and the men being naked puſhed them along with poles. About one hundred paces from the village to which they were going, they landed, began to ſing, and uſed conjurations with tow faſtened upon a rod, muttering ſomething over a dried fiſh's head, which they wrapped in the tow, and gave to an old woman to hold. The conjuration being over, they put upon the bride a coat of ſheep's ſkin, and tied four images about her: thus loaded ſhe had difficulty to move. They went again into their boats, and came up to the village, where they landed a ſecond time; at this landing-place, a boy of the village met them, and taking the bride by the hand led her, all the women following.

When the bride came to the hut, they tied a ſtrap round her, by which ſhe was let down the ſtairs, the old woman who carried the fiſh's head going before her. The head ſhe laid down at the foot of the ſtairs, where it was trodden upon by the bride and bridegroom and all the people preſent, and then thrown into the fire.

All the ſtrangers took their places, having firſt ſtripped the bride of ſuperfluous ornaments. The bridegroom heated the hut and dreſſed the victuals which they had brought with them, and entertained the inhabitants of the village.. The next day the landlord, entertained the ſtrangers with great ſuperfluity, who on the third day departed; the bride and bridegroom only remained to work ſome time with their father. The ſuperfluous dreſs which was taken from the bride was diſtributed among the relations, who were obliged to return them preſents of far greater value.

587 The former ceremonies only relate to a firſt marriage; for in the marriage of widows, the man and woman's agreement is ſufficient; but he muſt not take her to himſelf before her ſins

are taken away. This can only be done by ſome ſtranger's 587
firſt lying with her for once; but as this taking off of ſin is
looked upon by the *Kamtſchadales* as very diſhonourable for the
man, it was formerly difficult to find one to undertake it; ſo
that the poor widows were at a great loſs before our Coſſacks
came amongſt them; ſince which they have been in no want
of ſtrangers to take away their ſins. Marriage is forbidden only 582
between father and daughter, mother and ſon; a ſon-in-law may
marry his mother-in-law, and a father-in-law his daughter-in-law;
and firſt couſins marry frequently. Their divorce is very 586
eaſy, conſiſting only in a man's ſeparating beds from his wife:
in ſuch caſes the man immediately marries another wife, and
the woman accepts of another huſband, without any further
ceremony.

A *Kamtſchadale* hath two or three wives, with whom he lies 575
by turns. Sometimes he keeps them all in one hut, and ſometimes 831
they live in different huts. With every maid that he marries 585
he is obliged to go through the above-mentioned ceremonies.
Though theſe people are fond of women, yet they are not ſo
jealous as the *Koreki*. In their marriages they do not ſeem to
regard the marks of virginity. Nor are the women more
jealous; for two or three wives live with one huſband in
all harmony: even though he alſo keeps ſeveral concubines.
When the women go out they cover their faces with a 834
ſort of veil; and if they meet any man upon the road, and 562
cannot go out of the way, they turn their backs to him, 177
and ſtand 'till he is paſſed. In their huts they ſit behind a mat
or a curtain made of nettles; but if they have no curtain, and
a ſtranger comes into the hut, they turn their face to the wall,
and continue their work. This is to be underſtood of thoſe that
retain their ancient barbarity; for ſeveral of them now begin
to be civilized to a certain degree, though all of them ſtill
preſerve a rude harſhneſs in their manner of ſpeaking.

CHAP

[This chapter is a summary rather than an actual translation of the original Russian. For a complete translation see Kamchadal Source 2.]

CHAP. XVII. 1

163 *Of the* BIRTH *of their* CHILDREN.

IN general theſe people are not fruitful, for I could never learn that any one man had ten children by the ſame woman. 844 Their women, as they ſay, have commonly very eaſy births: *Steller* was preſent at the delivery of one of theſe women, who went out of the hut about her ordinary buſineſs, and in a quarter of an hour afterwards was carrying her child in her arms, without any change in her countenance. He likewiſe relates, that he ſaw 843 another woman who was in labour three days, and to his great ſurpriſe was at laſt happily delivered of a child, which came double, preſenting the hips firſt. The conjurers attributed the occaſion of this unnatural poſture to the father, who in the time that the child ought to have been born was employed in making ſledges, and bending the wood over his knee. Such ridiculous 844 cauſes do they aſſign for every uncommon effect. The women are delivered upon their knees, in preſence of as many people as are in the village, without diſtinction of age or ſex. They wipe the new-born child with tow, and tie the navel-ſtring with thread made of nettles, and then cut it with a knife of flint: they throw the placenta to the dogs. They put chewed epilobium upon the navel, and wrap the infant in tow inſtead of ſwaddling cloaths: then every one careſſes it, taking it in their arms, kiſſing it, and rejoicing with the parents. This is the only ceremony which they uſe. They can hardly be ſaid to have profeſſed midwives, and for the moſt part the mother or neareſt relation performs the office.

The women, as was mentioned above, who deſire to have 842
children, for this purpoſe eat ſpiders. Some child-bed women,
that they may the ſooner conceive again, eat the navel-ſtring of
the child. There are others who have as great averſion to having 847
children, and procure abortions by different poiſonous medicines,
in which they are aſſiſted by ſome knowing old women; but this
can never be done, as it is well known, but at the hazard of
their own lives. There are others, who are ſuch unnatural
wretches as to deſtroy their children when they are born, or
throw them alive to the dogs. They uſe likewiſe ſeveral herbs 842
and different conjurations to prevent conception. Their ſuperſtition, 847
alſo, is ſometimes the occaſion of great barbarity; for
when a woman bears twins, one of them at leaſt muſt be
deſtroyed, and ſo muſt a child born in very ſtormy weather;
though the laſt can be averted by ſome conjurations. After the 846
birth, the women, to recover their ſtrength, make uſe of fiſh
broth, made with an herb which they call *bale*; and then in
a few days return to their ordinary diet.

CHAP. XVIII.

Of their DISEASES *and* REMEDIES. 164 753

THE principal diſeaſes in *Kamtſchatka* are the ſcurvy,
boils, palſy, cancer, jaundice, and the venereal diſtemper.
Theſe diſeaſes they think are inflicted upon them by the
ſpirits that inhabit ſome particular groves, if ignorantly they
happen to cut any of them down. Their principal medicines 757
conſiſt in charms and conjurations, but at the ſame time they do
not neglect the uſe of herbs and roots. For the ſcurvy they uſe a

757 certain herb which they rub upon their gums, as alſo the leaves of the cranberry * and blackberry †. The Coſſacks cure themſelves with decoctions of the tops of cedar, and by eating wild garlick. The good effects of this medicine were felt by all the people that were in the *Kamtſchatka* expedition.

164 757 Boils are a moſt dangerous diſeaſe in *Kamtſchatka*, cauſing the death of numbers. They are very large, being often two and ſometimes three inches over; and when they break they open in about forty or fifty little holes. It is looked upon to be a very dangerous caſe, when no matter comes from theſe openings; and thoſe that recover are confined to their beds, ſometimes ſix and ſometimes ten weeks. The *Kamtſchadales* uſe raw hare-ſkins to bring the matter to a ſuppuration. The palſy, cancer, and *French* diſeaſe, are ſuppoſed to be incurable; the laſt, they ſay, was not heard of before the arrival of the *Ruſſians*. There is likewiſe another diſtemper which they call *ſuſhutch*, which is a ſort of ſcab, that ſurrounds the whole body under the ribs like a girdle. When this does not come to ſuppurate and fall off, then it is mortal, and, they ſay, every one muſt have this once in his lifetime, as we have the ſmall-pox. Mr. *Steller* gives a more ample account of their diſeaſes and remedies. He relates, that they uſe with ſucceſs the ſpunge for drawing out the matter in theſe boils. The Coſſacks apply to their boils the remains of the ſweet-graſs ‖ after they have extracted their brandy, and this often ſucceſsfully reſolves them.

757 844 278 The women uſe ſea raſberries ‡ to haſten their delivery; and alſo a ſort of coral, which they make into powder like crab-eyes, in a gonorrhea. Againſt coſtiveneſs they uſe the fat of the ſea wolf; in gripes, pains of the bowels, and colds, they uſe a

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* Vaccinium ramis filiformibus repentibus, foliis ovatis perennantibus.

† Impetrum. ‖ Spondylium foliolis pinnatifidis. ‡ Species fuci.

decoction of the pentaphylladis fruticoſus, and that not without ſucceſs. To wounds they apply the bark of the cedar, and with this they pretend they can even extract arrows. 757 278

In coſtiveneſs they likewiſe drink the broth of their ſtinking fiſh, and in fluxes they eat lac lunæ, which is very common in this country. For the ſame diſtemper they likewiſe uſe meadow-ſweet and tormentilla root.

Thoſe who have ſore throats uſe a decoction of the epilobium, which is alſo uſed by women in hard labours. When they are bit by a dog, or wolf, they lay the bruiſed leaves of the ulmaria upon the wound, drinking at the ſame time a decoction of them: this decoction they alſo admininiſter in the belly-ach and ſcurvy. The leaves and ſtalks bruiſed they uſe in burns. The decoction of this herb mixed with fiſh they uſe alſo in the tooth-ach; they hold it warm in their mouths, and lay a piece of the root upon the affected tooth. They uſe a ſpecies of gentian in the ſcurvy, and almoſt againſt every diſorder. In the *French* diſeaſe they apply the chamaenchododendros, but ſeldom to any advantage: in fluxes they uſe the quercus marina: in ſwellings of the legs and ſcurvy, they drink a decoction of the dryas; and procure ſleep by eating the ſeed of the ephedra. They foment their eyes with a decoction of ſcramus.

The inhabitants of the *Lopatka* uſe clyſters, which probably they learned from the *Kuriles*: they prepare them from a decoction of different herbs, ſometimes with fat and ſometimes without: this they put into a ſeal's bladder, faſtening to it any pipe which they can procure, and apply it in the common way: this medicine is in high eſteem among them, and uſed in moſt diſtempers. 757 177 278

In the jaundice, they have a medicine, which they look upon as infallible. They take the roots of the iris ſylveſtris, and after cleaning them, beat them in warm water, and apply the juice, which they ſqueeze out, as a clyſter, continuing it for 278 757

757 278 two days three times a day: this produces a purging, and generally gives great relief. After ſome time, if the cure is not completed, they repeat it again. They neither uſe lancets nor cupping glaſſes, but with a pair of wooden pincers draw up the ſkin, and pierce it with an inſtrument of chryſtal made on purpoſe, letting out as much blood as they want.

In pains of the back they rub the part affected before a fire with a root of the cicuta, being careful not to touch the loins, which they ſay would produce ſpaſms. In pains of the joints they place upon the part a little pyramid, made of a fungus which grows upon the birch-trees, and ſet the top of it on fire, letting it burn 'till it comes to the ſkin, which then cracks, and leaves a wound behind that yields a great quantity of matter. The wound they cure with aſhes of the fungus, but ſome give themſelves no trouble about it at all. The root of the anemonides, or ranunculus, they uſe to hurt or poiſon their enemies; and they likewiſe poiſon their arrows with it.

CHAP. XIX.

Of the BURIAL *of the* DEAD.

764 775 THE burial of the dead, if one can call throwing them to the dogs a burial, is different here from what it is in any other part of the world; for inſtead of burning or laying the dead bodies in ſome hole, the *Kamtſchadales* bind a ſtrap round the neck of the corps, draw it out of the hut, and deliver it for food to their dogs: for which they give the following reaſons; that thoſe who are eaten by dogs will drive with fine dogs in the other world; and that they throw them round

near the hut, that evil ſpirits, whom they imagine to be the 764
occaſion of their death, ſeeing the dead body, may be ſatisfied 775
with the miſchief they have done. However, they frequently
remove to ſome other place, when any one has died in the hut, 768
without dragging the corps along with them.

They throw away all the cloaths of the deceaſed, not becauſe 784
they imagine they ſhall have occaſion for them in the other world, but becauſe they believe that whoever wears the cloaths of one that is dead will certainly come to an untimely end. This ſuperſtition prevails particularly among the *Kuriles* of the *Lopatka*, who would not touch any thing which they thought had belonged to a dead perſon, although they ſhould have the greateſt inclination for it. The Coſſacks make uſe of this ſuperſtition to prevent one another ſometimes from ſelling ready-made cloaths, by aſſuring the buyer that they belonged to a dead perſon.

After the burial of the dead they uſe the following purifi- 764
cation: Going to the wood they cut ſome rods, of which they make a ring; and creeping through it twice, they carry it to the wood, and throw it towards the weſt. Thoſe who dragged out the body are obliged to catch two birds of one ſort or other; one of which they burn, and eat the other with the whole family. The purification is performed on the ſame day; for before that they dare not enter any other hut, nor will any body elſe enter their's. In commemoration of the dead, the whole family dine upon a fiſh, the fins of which they burn in the fire.[1]

[1] [Chapter XX, which discusses the three Kamchadal dialects was not translated "as they are very unintelligible to an English reader." Chapter XXI is in the Koryak File as Source 23.]

CHAP. XXII.

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ACCOUNT *of the Nation of the* KURILES.

THE manners of the *Kuriles* reſemble thoſe of the *Kamtſchadales* ſo much, that we ſhould have taken no notice of them ſeparately if their external appearance and language were not very different. We can give no account of their origin more than of the other inhabitants of *Kamtſchatka*.

These people are of a ſmall ſtature, black haired, round viſaged, ſomewhat ſwarthy, and withal more well-favoured than any of their neighbours. Their beards are thick, and their whole body is covered with hair, in which they particularly differ from all the other *Kamtſchadales*. The men ſhave their heads as far back as the crown, allowing the other hair to grow to its full length. This cuſtom they have probably taken from the *Japaneſe*, with whom they have ſome commerce. The women only cut the fore part of their hair, that it may not fall into their eyes. The lips of the men are blackened about the middle; the women's are entirely black, and ſtained round; their arms are likewiſe ſtained with different figures as far as the elbows. This cuſtom they have in common with the *Tchukotſkoi* and *Tunguſi*. Both men and women wear ſilver rings in their ears, which they get from the *Japaneſe*.

Their cloaths are made of the ſkins of ſea fowls, foxes, ſea beavers, and other ſea animals; and are generally compoſed of the ſkins of very different creatures, ſo that it is rare to ſee a whole ſuit made of the ſame ſort of ſkins. The faſhion reſembles

000 more that of the *Tunguſi*, than the *Kamtſchadales*. Though they are ſo little regardful of uniformity in their own country cloathing, they are very proud to acquire ſuch as are made of cloth, ſerge, or ſilk, particularly thoſe of a ſcarlet colour; but ſo little care do they take of them when they have got them, that they will wear them when employed about the dirtieſt work.

Their huts are much the ſame as thoſe of the *Kamtſchadales*, only they keep them a little cleaner, covering generally the floor and walls with mats made of graſs. They feed for the moſt part upon ſea animals, and very little upon fiſh.

They are as ignorant of a deity as the *Kamtſchadales*. In their huts they have idols made of chips or ſhavings curiouſly curled. Theſe idols they call *Ingool*, and are ſaid to venerate them in ſome degree, but whether as good or evil ſpirits I never could learn. They ſacrifice to them the firſt animal which they catch, eating the fleſh themſelves, they hang up the ſkin before the image; and when they change their huts they leave the ſkin and the idol there. If they make any dangerous voyage they take their idol along with them; which, in caſe of imminent danger, they throw into the ſea, expecting by this method to pacify the ſtorm; and with this protector they think themſelves ſafe in all their excurſions.

They travel in the ſummer time in boats, in the winter in ſnow ſhoes. The men are employed in catching of ſea animals, the women in ſewing, during the winter; but in the ſummer they go out with their huſbands to hunt.

They are more civilized than the neighbouring people, being ſteady honeſt, and peaceable; their way of ſpeaking is ſoft and modeſt; they have a reſpect for old people, and an affection for each other, particularly their relations. It is a pleaſure to ſee with what hoſpitality they receive ſuch as come to viſit them from other iſlands: thoſe that come in boats, and thoſe that receive them from the huts, march in great ceremony, dreſſed in all their warlike accoutrements, ſhaking their ſwords and ſpears, and bending their bows, as if they were going into an engagement, and dancing up to each other 'till they meet, ſhewing the greateſt ſigns of delight, embracing and hugging one another, and ſhedding tears of joy. The people of the huts then carry the viſitants into their habitation, where they entertain them in the beſt manner, ſtanding and hearing them relate all the adventures that have happened to them in their voyage. The honour of this relation is reſerved for the oldeſt, who is always the orator; he informs them of every thing that has happened ſince the laſt meeting, how they have been employed, how they lived, where they travelled, whom they ſaw, what good fortune or misfortune has happened to them, who have been ſick, or who are dead. This relation ſometimes continues for three hours. When the ſtranger has ended, the oldeſt of the people who are viſited gives him an equal information of every thing that has happened to them. Before this the reſt muſt not ſpeak to one another; then, according as circumſtances are, they either condole with, or congratulate, each other, and finiſh the entertainment with eating, dancing, ſinging, and telling of ſtories.

In their courtſhips, marriages, and the education of children, they differ very little from the other *Kamtſchadales*. They have two or three wives, with whom they never publickly ſleep, but ſteal to them privately in the night time. They have an extraordinary way of puniſhing adultery: the huſband of the adultereſs challenges the adulterer to a combat, which is performed in the following manner: both the combatants are ſtripped quite naked, and the challenger gives the challenged a club about three feet long, and near as thick as one's arm; then the challenger is obliged to receive three ſtrokes upon his back from the challenged, who then returns him the club, and is treated in the ſame manner;

000 ner; this they perform three times, and the reſult is generally the death of both the combatants: but it is reckoned as great diſhonour to refuſe this combat, as to refuſe an invitation to a duel among the people of *Europe*. If any one prefers his life or ſafety to his honour, the adulterer then is obliged to pay to the huſband of the adultereſs whatever he demands, either in ſkins, cloaths, proviſions, or other things.

The women have a harder time in child-bearing than the *Kamtſchadales*, for they ſay, the *Kuriles* women do not recover after child-bearing for three months. The midwives give names to the children when they are born, which they always keep. If they have twins they deſtroy one.

Such as die in the winter they bury in the ſnow; but in the ſummer they are buried in the earth. Self-murder is as frequent here as among the *Kamtſchadales*.

* * *

OF THE
CONQUEST of *Kamtſchatka.*

PART IV.

CHAP. I.

Of the DISCOVERIES *made of* Kamtſchatka, *and the Planting of* Ruſſian *Colonies there.*

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THO' the *Ruſſian* territories upon the Frozen Ocean, from the river *Lena* eaſt to the river *Anadir*, were of prodigious extent, yet it was judged proper to give orders to every commiſſary to inform himſelf of the countries beyond the *Anadir*, and to endeavour to bring the inhabitants under ſubjection. By this means a knowledge of *Kamtſchatka*, and of the different people who inhabit it, was long ago obtained; eſpecially ſince the *Koreki*, which live upon

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upon the *Penſchinſka* and *Olutorſkoy* ſeas, came from *Anadir*, and had communication with the inhabitants of *Kamtſchatka*, to whoſe country they frequently travelled. But we have ſtill no authentick account who was the firſt *Ruſſian* that diſcovered theſe places: there is, it ſeems, a tradition of one *Theodot*, who for the ſake of trade went into *Kamtſchatka* as far as the river *Nicula*, which river is now called after him, *Theodotoſhine*. They pretend, that he went out of the river *Bova* into the Frozen Ocean with ſeven boats; that, being ſeparated from the reſt by a ſtorm, he was driven to *Kamtſchatka*, where he paſſed the winter; that the next ſummer, going round the *Kurilſkaya Lopatka* through the *Penſchinſka* ſea, he arrived at the river *Tegbil*, where he and all his company were murdered by the *Koreki*, which diſaſter was occaſioned by their having ſeen one of the *Ruſſians* kill another with fire arms; for the *Koreki* upon obſerving the effect of theſe weapons at firſt eſteemed the *Ruſſians* as ſome ſuperior beings; but perceiving them to be mortal, they were glad to free themſelves from ſuch dangerous neighbours. This tradition is confirmed by the account of one *Simeon Deſhnef*; who relates, that their voyage was very troubleſome, and that they were driven at laſt upon that promontory to the eaſt of the river *Anadir*: however, all this ſeems to be very uncertain. There is likewiſe an account, that in the year 1660 they recovered a woman who had been carried away from *Jakutſki* by the *Koreki*, and who related, that *Theodot*, with one of his companions died there of the ſcurvy; that others of them were murdered; and that the remainder, who eſcaped in boats, were never heard of. The *Kamtſchadales* acknowledge that ſome winter huts upon the river *Nicula* were built by *Ruſſians*.

All theſe different reports may eaſily be reconciled, if we ſuppoſe that *Theodot* and his companions were loſt between *Anadir* and *Olutorſkoy*. They had wintered in *Kamtſchatka*, upon the river *Tegbil*; whence in returning to *Anadirſk* over

land, he died upon the road, and his companions were either R,
murdered or loſt. However, at any rate, this diſcovery was 177
of no great conſequence to the intereſt of the empire, as •17
no information of the country was thereby obtained; ſo that
the firſt diſcovery of *Kamtſchatka* may be attributed to the
Coſſack *Atlaſof*.

This *Atlaſof* was ſent from *Jakutſki* to the fort *Anadirſk* in the year 1697. He was ordered to ſee if he could diſcover new countries, and bring them in ſubjection to the empire of *Ruſſia*, by the aſſiſtance of the *Koreki Yukageri*, who lay near *Anadirſk*. In the year 1698 he ſent out one *Luke Moroſkoi*, with ſixteen *Koreki*, in order to gather in the taxes at the moſt diſtant places; who at their return reported, that they had not only been among the *Koreki*, but even within four days' journey of *Kamtſchatka*; that they had taken one of their little forts, and had got a letter written in a language which no body could underſtand. Upon this, *Atlaſof*, with ſixty Coſſacks and as many *Yukageri*, marched into the country of *Kamtſchatka*, in order to make diſcoveries, and to prevail upon them to pay tribute, which he by fair methods obtained from the *Acklanſki*, but the fort *Taloſki* he reduced by force. After this, as they relate, he divided his company into two corps; the one of which he ſent to the Eaſtern Ocean, under the command of *Luke Moroſkoi*, and with the other he in perſon went towards the *Penſchinſka* ſea. Upon the *Pallana* his allies, the *Yukageri*, rebelled againſt him, killed three of his Coſſacks, and wounded *Atlaſof* himſelf and fifteen others; however he overcame the *Yukageri*, and killed them all. Notwithſtanding this misfortune he purſued his journey ſouthwards. Upon the river *Tegbil* he joined the party under *Moroſkoi*, and exacted tribute from the people that lived upon the *Napan*, *Kigil*, *Itche*, *Sintche*, and *Haruſof*, and reſcued a *Japaneſe* priſoner that he found among the *Kamtſchadales*.

Returning from the river *Itche* he went to the river *Kamtſchatka*, where he built the upper *Kamtſchatkoi* fort,

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and left in it *Potap Sirukof*, with fifteen Coſſacks. *Atlaſof* returned from this journey to *Jakutſki* the 2d of *July* 1700, and brought along with him the *Japaneſe* he had reſcued, and the *Kamtſchatka* tribute, which conſiſted of 3200 ſables, ten ſea beavers, ſeven pieces of beavers' ſkins, four otter ſkins, ten grey foxes, and 191 red foxes; and 440 ſables on his own account. With this tribute he was diſpatched to *Moſcow*, where, for his ſervices, he was made Chief of the Coſſacks at *Jakutſki*, and was ordered to return again to *Kamtſchatka*, and to take along with him from *Tobolſka*, *Jeniſei*, and *Jakutſki*, 100 Coſſacks. Orders were ſent to *Tobolſka* to furniſh them with ſome ſmall cannon, colours, a drummer, arms, and ammunition. However *Atlaſof* was prevented from this expedition before the year 1706; for in the year 1701, upon the river *Tunguſi*, he plundered a boat with *Chineſe* goods, belonging to *Logan Dobrini*, whoſe ſervant petitioned againſt him, at the Chancery of *Jakutſki*, for which he and ten of the principal robbers were put in priſon; and in the year 1702 *Michael Zinoveef*, who had been there formerly, was ſent chief of this expedition.

All this time the Coſſack *Potap Sirukof* lived quietly in the fort of *Kamtſchatka*, and for three years received no injury from the inhabitants: for he did not demand any tribute, but only traded with them like a merchant. At laſt they determined to leave the fort; but on their return to *Anadirſk*, he and all his companions were ſet upon and killed by the *Koreki*. His ſucceſſor appears to have been *Timothy Cobelof*, who is reckoned the firſt governor of *Kamtſchatka*. In his time a fort was built upon the river *Karakeef*, about half a verſt diſtant from the firſt. He built winter huts upon the river *Teloſka*, and gathered voluntary tribute upon the river *Kamtſchatka*, and upon the *Penſchinſka* and Beaver ſea-coaſt; with which he returned, in the year 1704, to *Jakutſki*. At the ſame time a party of the *Anadirſki* Coſſacks, under the command of *Andrew Kutin*, built ſeven winter huts upon the river *Yaka*, which falls into the Eaſtern Ocean, and began to gather taxes from the neighbouring *Koreki* R. 177 .17

Michael Zinoveef, ſent in place of *Atlaſof* from *Jakutſki*, ſucceeded *Cobelof*; which place he held 'till he was relieved by *Koleſof*, in the year 1704. In his time he made books of tribute, in which the names of the *Kamtſchadales* were inſerted; he tranſported the winter huts to a more convenient place, built a little fort upon the great river, and having brought things into tolerable order, he returned to *Jakutſki* with his tribute. *Koleſof* arrived there in the harveſt 1704, and continued to the year 1706; for the *Outori* killed two perſons on their journey that were appointed to relieve him, viz. *Vaſili Protopopof* in 1704, and *Viſili Shelcocoſnicof* in 1705. In his time was the firſt expedition undertaken againſt the *Kuriles*, about twenty of whom they brought back with them, and drove all the reſt away. He carried all his tribute ſafe to *Jakutſki*, notwithſtanding he was way-laid at the fort *Kaſuki*, upon the river *Pingin*, by the *Koreki*, but he retired to another little fort called *Aklanſki*, where he lived about fifteen weeks, 'till the winter way became paſſable. During this time the *Koreki* of *Kaſuki* tried ſeveral times to ſurpriſe him, but he was defended by the inhabitants of *Acklanſki*. Here *Koleſof* met ſeven people that were ſent with preſents and ammunition to the fort of *Kamtſchatka*; as he was in great want of the latter, for their ſecurity he added to them thirteen of his own party, and gave the command to *Simon Lomgaf*, whom he ordered likewiſe to gather tribute round the three *Kamtſchatka* forts.

At the departure of *Viſili Koleſof* all the tributary *Kamtſchadales* were tolerably quiet; but afterwards, when *Theodore Anqudenof* was commiſſary in the upper fort, *Theodore Yaregin* in the lower fort, and *Demetrie Yaregin* upon the Great River, the inhabitants of the Great River rebelled, burned the fort, and murdered all the inhabitants: at the ſame time five tax-gatherers were killed upon the Beaver Sea. The reaſon of their rebellion

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perhaps might be, that the taxes were gathered with ſeverity, which was the more intolerable, as formerly they had never been accuſtomed to pay any, and therefore endeavoured, by the murder of their oppreſſors, to recover their ancient liberty: beſides, they imagined that theſe *Ruſſians* might be themſelves ſome runaways, as they had never obſerved any new faces among them; they hoped too, that the *Koreki* and *Olutores* would prevent the arrival of new recruits from the *Anadirſk*, as they heard that they had murdered two commiſſaries, with the Coſſacks under their command; however they were deceived in their hopes, for a great many of them were killed by their future conquerors, and their numbers very much reduced.

All this while the Coſſacks were obliged to be very much upon their guard, and keep themſelves cloſe in their forts. In the year 1705 *Atlaſof* was freed from priſon, and ſent commiſſary to *Kamtſchatka*, with full authority, the ſame as he was inveſted with in the year 1701. The abſolute power of puniſhing with rods, or even the knout, was no otherwiſe circumſcribed than by a recommendation to do ſtrict juſtice, and to treat the *Kamtſchadales* in particular with lenity and tenderneſs. He went from *Jakutſki* accompanied by a great number of Coſſacks, furniſhed with warlike ſtores, and two pieces of braſs cannon; but ſo far did he forget the favour of the pardon he had obtained for his former robbery, and diſregard his new inſtructions, that before he arrived at *Anadirſk* he began to exerciſe his cruelty upon thoſe that were under his command, and became ſo intolerable that they ſent a petition thence againſt him to *Jakutſki*. Notwithſtanding this he arrived ſafely at *Kamtſchatka* in the month of *July* 1707, and took the chief command over all the commiſſaries that were there.

In the month of *Auguſt* he ordered one *John Taretin*, with ſeventy Coſſacks, to march againſt the rebels who had killed the tax-gatherers upon the Beaver Sea. He met with no oppoſition

before the 27th of *November*, in his whole march from the R.
upper fort to *Awatſcha*, but coming near the bay of *Awachinſkay*, 177
which is called at preſent the haven of *Peter* and *Paul*, .17
they were met in the evening by 800 *Kamtſchadales*, who thought themſelves ſo certain of overcoming the Coſſacks, that they reſolved not to kill but take them all priſoners, every one being furniſhed with a rope to bind them.

The next day *Taretin* went to the bay of *Awatchinſkay*, where he found all the boats and veſſels of the rebels; but they had hidden themſelves in the woods on each ſide of the road; and allowing the headmoſt to paſs they ruſhed out upon the middle from both ſides. The Coſſacks defended themſelves ſo well, and fought ſo obſtinately, that great numbers of the rebels were killed, and the reſt ſaved themſelves by flight; ſix of the Coſſacks were ſlain, and ſeveral wounded. There were only three *Kamtſchadales* taken priſoners. After this action the inhabitants continued in a ſtate of rebellion 'till the year 1731. From this expedition the Coſſacks returned to the upper fort with what tribute they had gathered, and ſome hoſtages. Hitherto the government of *Kamtſchatka* had been in tolerable order, and the Coſſacks preſerved a regard for their commanders; but afterwards they began to commit great irregularities, plundering the inhabitants, ſeizing their perſons, and murdering others, in defiance of the governor.

CHAP. II.

Of the MUTINY *of the* COSSACKS, *and their Diſcovery of the Iſlands lying between* Kamtſchatka *and* Japan.

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THE Coſſacks were diſſatisfied with *Atlaſof*. This diſcontent, encreaſing by his continued ill conduct and their own licentiouſneſs, made them reſolve to deprive him of the command, which they did in *December* 1707; and they wrote to *Jakutſki*, in their own vindication, that he gave them none of thoſe proviſions which were gathered from the *Kamtſchadales*, for their ſuſtenance; for they being otherwiſe employed in the fiſhing time, than in catching fiſh, muſt ſtarve, unleſs the governor would ſupply them from the publick ſtores, which they charged him with embezzling for his own private advantage. They alſo accuſed him of having taken bribes to let the hoſtages go, which rendered the natives ſo inſolent, that the tax-gatherers upon the *Penſchinſka* ſea were obliged to ſave themſelves by flight. To this they added his cruel treatment of *Daniel Belaiof*; and that, when the other Coſſacks begged of him that he would not cut and ſlaſh any of them in his paſſion, but puniſh them as his orders directed in caſe they were found guilty, he replied, that if he was to kill them all he ſhould not be puniſhed for it: they beſides repreſented, that he endeavoured even to irritate the natives againſt the Coſſacks; for having called ſome of the principal people of the former, he told them, he had wounded that Coſſack becauſe he and others would have forced him to take the bread and proviſions from them, their wives, and children; upon which the *Kamtſchadales* in that neighbourhood left the place, and killed three Coſſacks; that he had taken to his own uſe moſt of the goods that were ſent from *Jakutſki* to make preſents of to the natives; and that he had compelled one of the *Kamtſchadales* to give him a black fox-ſkin for his own uſe, which the ſaid native had deſigned to pay in as a tribute. R 177 .17

This accuſation of their's, though it may be a proof of their former mutinous diſpoſition, yet gives us room to believe that a great deal of what they alledged was true, he being a man of a very bad character and conduct, and exceedingly avaricious, as appeared by the great riches he had amaſſed in ſo ſhort a time: but it is ſcarce credible that he ſhould endeavour to irritate the natives againſt his own people, on whoſe protection the ſafety of his own life depended; for the intended murder of the tax-gatherers upon the *Penſchinſka* ſea was more to be attributed to their own oppreſſion of the natives than to any miſrepreſentation of *Atlaſof*, as it appeared they threatened to kill ſome *Kamtſchadales*, who inſiſted on paying but one ſable inſtead of two.

They conferred the command on *Simeon Lomyof*, impriſoned *Atlaſof*, and confiſcated all his effects to the treaſury, which conſiſted of 1234 ſables, 400 red foxes, 14 grey foxes, and 75 ſea beavers, beſides a great number of other furrs. *Atlaſof* eſcaped, and fled to the lower fort, of which he endeavoured to obtain the command, but was prevented by the commiſſary *Theodore Yaregin*. During theſe confuſions, the petition that was ſent againſt *Atlaſof* reached *Jakutſki*. The governor, fearing that the diſſentions and differences between *Atlaſof* and the Coſſacks might occaſion the loſs of *Kamtſchatka*, ſent to court for farther directions; and in the interim diſpatched *Peter Tcherekof*, with fifty-five Coſſacks, two pieces of cannon, and ammunition. While *Tcherekof* was upon the road, advice was brought from *Kamtſchatka* that the Coſſacks had taken the command from *Atlaſof*: upon which orders were ſent after *Tcherekof*, to examine ſtrictly

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into all this affair, and tranſmit his report to the *Jakutſki* Chancery, by the commiſſary *Simeon Lamyof* for their reſolution, and that by the ſame hand he ſhould likewiſe ſend all the taxes which were gathered. But *Tcherekof* had left *Anadirſk* before this order arrived, and, as the road from thence to *Kamtſchatka* was dangerous, the meſſenger durſt not go any farther, for the travelling along the *Olotorſki* and *Penſchinſka* ſeas was ſo very unſafe that on the 20th of *July* 1709, notwithſtanding *Tcherekof's* force, they were fallen upon in the day-time, their ſtores and baggage were plundered, ten of them killed, and the reſt ſurrounded 'till the 24th, when they made a bold puſh, and fought their way through with the loſs of two more of their company.

During the government of *Tcherekof* two things happened that deſerve notice: 1ſt, The unfortunate expedition of the Coſſack Lieutenant *John Haritonof* with forty men againſt the rebels upon the North-Eaſt River, who fell upon him in great numbers, killed ten of his people, and wounded moſt of the reſt, whom they likewiſe kept beſieged four weeks. 2d, A bark from *Japan* being caſt away on the Beaver ſea coaſt, *Tcherekof* went with fifty men and reſcued four of the *Japaneſe* from the natives, whom on that occaſion he reduced to obedience, as alſo the inhabitants round the rivers *Jupinof* and *Oſtrova*, and obliged them to pay their tribute.

In the month of *Auguſt*, when *Tcherekof* returned to the upper *Kamtſchatka* fort, he found the Lieutenant *Myeronof*, who was ſent to relieve him; ſo that at this time there were three chiefs at *Kamtſchatka*, namely, *Atlaſof*, *Tcherekof*, and *Mieronof*.

When *Tcherekof* had delivered up to *Mieronof* the command, he left the upper *Kamtſchatkoi* fort in the month of *October*, and taking with him the tribute he had gathered, with a proper convoy, marched to the lower fort, where he reſolved to winter, and in the

the ſummer to ſail through the *Penſchinſka* ſea. *Joſeph Mieronof* came likewiſe to the lower fort upon the 6th of *December*, to give orders concerning the building boats for carrying off the tribute; and having left proper directions for this purpoſe with *Alexi Alexander*, he ſet out with *Tcherekof* to the upper fort, on the 23d of *January* 1711: but he was murdered on the road by the twenty Coſſacks who were his convoy. In the mean time thirty-one of the others went to the lower fort, where they killed *Atlaſof*. The heads of this mutiny were *Daniel Anſiforof* and *John Koſoroſki*, who ſhared the goods of thoſe they put to death; and inviting all the reſt to join with them, their number increaſed to ſeventy-five. All *Atlaſof*'s furrs and goods which were carried to *Teghil* they brought back, ſeized on all the ſtores which were got ready for *Tcherekof*'s voyage, and deſtroying the ſails and cordage returned to the upper fort on the 20th of *March*.

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On the 17th of *April* in the ſame year, theſe mutineers ſent a petition to *Jakutſki*, confeſſing the murder of *Tcherekof* and *Mieronof*, without mentioning that of *Atlaſof*. In this petition they endeavoured to excuſe their conduct, by accuſing theſe commiſſaries of tyranny and avarice, and charging them with having embezzled the effects of the government, and purchaſing goods upon their own account, from which they received incredible profits; and that they had treated both the natives and Coſſacks with great ſeverity, to avoid which they were obliged to give them up their beſt effects, and to receive their ſalary in what goods they thought fit to allow them, and thoſe taxed at what price they pleaſed; which oppreſſion they exerciſed in confidence that no petitions againſt them would ever reach *Jakutſki*. To this petition they joined a liſt of the effects of *Tcherekof* and *Mieronof*, which they had found: *Tcherekof*'s conſiſted of 500 red foxes, and 20 ſea beavers; *Mieronof*'s, of 800 ſables, 400 brown foxes, and 30 ſea beavers.

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This year in the ſpring, the ſeventy-five perſons before mentioned marched againſt the rebels, and built a fort upon the Great River, thinking to merit their pardon by ſo eſſential a piece of ſervice as the reduction of that diſtrict. On the 1ſt of *April* they deſtroyed a fort of the *Kamtſchadales*, which lay between the rivers *Biſtroy* and *Goltſofka*, where now the *Ruſſian* fort *Bolſcheretſkoi* ſtands. There they remained without any diſturbance from the *Kamtſchadales* 'till *May*; on the 22d the *Kamtſchadales* and *Koreki* came in boats down the Great River in ſuch numbers that they threatened to ſmother them with their caps without uſing any other arms. On the 23d of *May*, the Coſſacks, after having performed divine ſervice, for they had a prieſt along with them, made a ſally with one half of their party, and firing upon the *Kamtſchadales* ſeveral times, killed great numbers of them: however they continued the fight 'till the evening, when at laſt the Coſſacks obtained the victory. Such numbers of the rebels were killed and drowned in this engagement, that the river was full of dead bodies; but the *Ruſſians* had only three men killed, and ſome few wounded. This ſucceſs was followed by the ſubjection of all the villages and forts upon the Great River, who conſented to pay their tribute as before. They went into the country of the *Kuriles*, and even unto the firſt iſland; all the inhabitants of which they likewiſe made tributary. This was the firſt time that any *Ruſſian* had been upon either of theſe iſlands.

In the year 1711, *Vaſili Savaſtianof* was ſent to ſucceed *Mieronof*; for they had no account yet of his having been murdered, nor had they any knowledge at *Jakutſki* of the fate of the other commiſſaries. *Savaſtianof* gathered the taxes about the upper and lower forts: *Anſiforof*, the head of the mutineers, had done the ſame upon the Great River, and came to the lower fort pretending to have returned again to his duty; however he came accompanied with ſuch a ſtrong party that he was in no danger-

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danger of being called to account for his mutiny, but was ſent as tax-gatherer to the Great River. As he returned towards the *Penſchinſka* ſea, he reduced to obedience the rebels upon the rivers *Konpackova* and *Worofski*, and obliged them to pay the tribute, which they had refuſed for ſome time. He was ſurpriſed by the rebels upon the river *Awatſtha* in the month of *February* 1712: When he with 25 Coſſacks came among them, they received him in a large hut, built on purpoſe, with a private entry under it. They made him very rich preſents, promiſed to pay the full tribute, and gave hoſtages as an earneſt of their ſincerity: but the following night they ſet fire to the hut, and burned both the *Ruſſians* and their own hoſtages together; who were ſo irritated againſt the *Ruſſians*, that when the people called to them to come out of the hut, they begged that they would have no regard to them, but burn the Coſſacks by any means.

The puniſhment of the murderers of *Anſiſorof* deterred the natives from the like attempts, and procured a laſting ſecurity to the tax-gatherers. A party was ſent out to catch the murderers where they could find them: at this time there was one man taken, who being put to the torture confeſſed not only the murder of the three commiſſaries, but likewiſe a great many other dangerous deſigns, as that they reſolved to deſtroy the upper and lower forts of *Kamtſchatka*, murder the governor *Shepetkof*, plunder the fort of all the goods, and fly to the iſlands; but they were prevented in this by the great number of Coſſacks which they found.

Shepetkof, giving the command to *Conſtantine Koſerof*, left *Kamtſchatka* on the 8th of *June* 1712, and ſailed with the tribute which he had gathered over the *Olutorſkoy* ſea, and up the river of the ſame name as far as it was navigable for boats. Then he was obliged to fortify himſelf againſt the attacks of the *Olutores*, who on the road had ſeveral times fallen upon

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him. He continued in this little fort 'till the 9th of *January* 1713, with 84 Coſſacks. In the mean time he ſent to *Anadirſk* for a reinforcement, and carriages to tranſport the tribute. There were ſent him 60 Coſſacks, and a great number of reindeer; with which he ſet out, and arrived ſafe at *Jakutſki* in the month of *January* 1714. This was the only tribute which had arrived ſafe, upon account of the confuſions, ſince the year 1707. It amounted in all to 13,280 ſables, 3282 red, 7 black, and 41 blue foxes, and 259 ſea beavers.

After the departure of *Shepetkof*, *Kregezof*, who was commiſſary in the upper *Kamtſchatkoi* fort, went with ſeveral under his command to the lower fort, ſeized upon *Yaregin* who was commiſſary there, put him to all kind of torture, plundered the fort, and obliging *Yaregin* to turn monk gave the command of the fort to *Bogdan Kanaſhof*; who continued there 'till the arrival of *Vaſili Koleſof*, formerly a lieutenant of the Coſſacks; and *Kregezof* with 18 of the mutineers returned to the upper *Kamtſchatkoi* fort, where he was very troubleſome to the lower fort for a long time.

Koleſof was ſent from *Jakutſki* in the year 1711, with orders to enquire into the conduct of the mutineers, and arrived at *Kamtſchatka* on the 10th of *September* 1712; where he condemned two of the rebels to death, and branded ſeveral others. The lieutenant *Koſerof*, who was head of the mutiny after the death of *Anſiforof*, and ſeveral others, were puniſhed; but *Kregezof*, who was ring-leader in the laſt mutiny, not only refuſed to ſubmit to his juriſdiction, but threatened even to attack him, and to deſtroy the lower fort. In conſequence of which he marched againſt him with cannon and 30 men of his party, and was joined in his march by other Coſſacks from the Great River: however he did not accompliſh his deſign, but was obliged to return to the upper fort, where in

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a very ſhort time his own people took the command from him, and put him in priſon; for finding that the other Coſſacks did not join him, they imagined it would be impoſſible for them to paſs the lower fort in their way to the ſea. Whereupon they divided themſelves into two parties; one of which ſtood by *Koſerof*, and the other joined *Koleſof*. By this means *Koleſof* made himſelf maſter of the upper fort in the year 1713. *Kregezof* was puniſhed with death, with ſome others of the ring-leaders, and the reſt were fined: thoſe Coſſacks and tax-gatherers, who continued in their duty, were rewarded. Thus an end was put to the rebellion.

After this *Koleſof* ſent *Koſeroſki* with 55 Coſſacks, 11 *Kamtſchadales*, and ſome cannon, ordering them to build ſmall veſſels upon the Great River, and to make diſcoveries upon the iſlands that belong to *Japan*. In this expedition they reduced to obedience ſeveral of the *Kuriles* who dwelt upon the *Lopatka*, and the firſt and ſecond *Kurilſki* iſlands. They alſo procured ſome account of the iſlands that were more diſtant, which traded with the inhabitants of the city *Matma*, and who brought to them iron kettles, varniſhed cups and platters, ſables, and different ſorts of ſtuffs made of cotton and ſilk. *Koſeroſki* brought a ſortment of theſe merchandiſes along with him.

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CHAP. III.

Of the COMMISSARIES *who ſucceeded* Vaſili Koleſof *until the great Inſurrection at* Kamtſchatka; *with the Diſcovery of a Paſſage through the* Penſchinſka Sea *from* Ochotſka *to* Kamtſchatka.

IN *Auguſt*, 1713, *John Ineſiſki* was ſent to relieve *Vaſili Koleſof.* In the time of his government he built a church at a place called the Springs, whither he deſigned to remove the lower fort, which was afterwards executed; the former ſituation being on a marſh, which was ſometimes overflowed by the high water. This fort continued until the year 1731. In the time of the great rebellion, it was burned down by the rebels. He likewiſe marched againſt thoſe who rebelled upon the river *Awatſcha*, who had murdered *Anſiforof* with his 25 Coſſacks. His ſtrength conſiſted of 120 Coſſacks and 150 *Kamtſchadales.* The rebels had fortified themſelves ſo ſtrongly, that they held out two weeks; but at laſt they ſet their fort on fire, which was burned with all the people that were in it: the reſt ſubmitted, and promiſed to pay their tribute. They likewiſe took and burned the fort *Paratoon.* After this time the *Kamtſchadales* upon *Awatſcha* began regularly to pay their tribute; for before this they generally gave but juſt what they pleaſed, being almoſt always in a ſtate of rebellion.

In 1714 *Yaniſioſki*, and the former commiſſary *Vaſili Koleſof*, who had not been able to undertake the journey to *Jakutſki* for want of hands in the year 1713, paſſed in boats over the *Olutorſkoy* ſea, and arrived the latter end of *Auguſt* upon the river

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river *Olutora*, where they found *Athanaſius Petrof*; who being joined by a great many Coſſacks from *Anadir*, together with the *Yukageri*, defeated the *Olutores*, deſtroyed their ſtrongeſt places, and in place thereof built a *Ruſſian* fort. Here they remained until the winter. The taxes which both theſe commiſſaries brought along with them were 5640 ſables, 751 red foxes, 10 blue, 137 ſea beavers, 4 ounces of gold in bits, which were taken from the *Japaneſe*, whoſe veſſels had been wrecked upon the coaſt of *Kamtſchatka*. Upon the departure of theſe commiſſaries a garriſon of 100 men, a lieutenant, and two prieſts, were left in the new fort upon the *Olutora*.

On the 2d of *December* 1714, the *Yukageri* who were with *Petrof* fell upon him near to *Acklanſkey* fort, and having murdered him, the people that were with him ſeized upon the tribute. The commiſſaries *Koleſof* and *Yaniſioſki*, with ſixteen others, eſcaped into the *Acklanſkey* fort, but were not able to ſave their lives; for the *Yukageri* ſurrounding the fort prevailed upon the *Koreki* to murder theſe people, who had truſted themſelves to their protection. The occaſion of this misfortune was owing to the tyranny and oppreſſion of *Petrof*. All pains were taken to recover the plundered goods, but to very little effect, as they were divided among ſo many different nations and people; ſo that ſome of the richeſt furrs fell into the hands of thoſe who knew ſo little of their value, that for one or two pipefuls of tobacco they would ſell a fine ſable or fox ſkin. This diſturbance of the *Yukageri* and *Koreki* continued more or leſs 'till the year 1720, when they were reduced to obedience by *Stephen Trifonof*, a gentleman of *Jakutſki*, who went againſt them with a great number of Coſſacks. So far had they carried their deſigns, that they endeavoured to prevail upon the *Tchukotſkoi* to join in their rebellion, and to deſtroy the fort of *Anadir*.

After the murder of the commiſſaries the tribute of *Kamtſchatka* was no more carried through *Anadir*, but ſent directly by

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ſea to *Ocbotſka*, which is by far a more convenient and leſs dangerous paſſage; ſo that now the road to *Anadir* is entirely neglected. This paſſage by ſea was diſcovered in the year 1715, by one *Coſmus Socolof*, who was under the command of Colonel *Ylchin* ſent to deſcribe the iſlands that lie upon that ſea. At this time *Alexi Petriloſki* was commiſſary at *Kamtſchatka*, againſt whom the Coſſacks began again to mutiny; and by the conſent of *Socolof*, they took the command from *Petriloſki*, put him under arreſt, and confiſcated his goods. He was the occaſion of his own misfortunes, by extortion, an unbounded avarice, and tyrannically oppreſſing to the laſt degree every man under his command. By theſe means he had acquired ſuch riches in a very ſhort time, that they far exceeded two whole year's tribute of *Kamtſchatka*.

The natives were tolerably quiet all this while, excepting ſome ſmall differences between the *Kuriles* of the *Lopatka* and another tribe, which was the cauſe of the deſtruction of ſeveral tributary *Kuriles*. The tribe, who was the firſt beginner of this confuſion, was ſo much afraid of being puniſhed by the *Ruſſians*, that they would never come to any terms of accommodation. However, at laſt, they were reduced with no great trouble. The conduct of the *Ruſſian* commiſſaries and tax-gatherers was ſo irregular, and ſo diſagreeable to the natives, that the moſt fatal conſequences were to be feared.

To *Petroloſki* ſucceeded as commiſſary *Coſmus Vaichelaſhof*, to whom ſucceeded *Gregory Kamkin*. In the year 1718, at once three commiſſaries were ſent from *Jakutſki*; *John Uvarofski* to the lower *Kamtſchatkoi* fort, *John Porotof* to the upper, and *Baſil Kochanof* to the fort upon the Great River. According to cuſtom, the Coſſacks very ſoon deprived them all of their authority, and put them into priſon, where they continued half a year, and at laſt eſcaped. However, the authors of this mutiny were brought to *Tobolſki*, and puniſhed with death.

While the Coſſacks perſevered in this mutiny, ſeveral of the tax-gatherers were murdered by the natives. R.

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John Charetonof, who had been appointed commiſſary, in 1719 marched againſt the rebellious *Koreki*; but being ſurpriſed by them he and ſeveral of his company were killed, which was done in this manner: The rebels pretending to ſubmit, gave them hoſtages and preſents; but afterwards fell upon *Charetonof*, and killed him and ſeveral others. However, they paid very dear for this treachery; for ſome of the Coſſacks, recovering from their ſurpriſe, drove them into their fort, where they burned or killed every man of them. In the following years, until the great rebellion of *Kamtſchatka*, nothing remarkable happened, if we except thoſe conſiderable expeditions that were ſent out in the years 1727, 1728, 1729, to make diſcoveries among the iſlands of the *Kuriles*. The firſt was conducted by two mariners, *John Evrinof* and *Theodore Luſin*, who returned in 1727. In 1728 was ſent out the firſt great ſea expedition, to diſcover and deſcribe all the coaſt towards the north. Having proceeded as far as the latitude 67° 17′, they returned to *Peterſbourg* in the year 1730. In 1729 a party arrived there under the command of Captain *Paulutſkoy*, and a chief of the Coſſacks called *Sheſtocof*. They were ordered to go along the coaſt towards the ſouth to make proper diſcoveries, and to bring all the inhabitants of theſe places, either by fair means or force, to pay a regular tribute; and for that purpoſe, to build forts, and endeavour to eſtabliſh ſome commerce. They built ſome forts, and deſcribed the coaſt as far as the river *Udan* upon the *Chineſe* frontiers. *Sheſtocof* was killed in the year 1730 by the *Tchukotſkoi*, who had fallen upon the tributary *Kereki*; and Captain *Paulutſkoy* was ordered to join Colonel *Merlin*, in quelling the rebellion of *Kamtſchatka*. He was indeed ſo far more ſucceſsful than *Sheſtocof*, that he ſeveral times defeated the *Tchukotſkoi*, and for ſome time rendered the *Kereki* and *Anadirſkoi* ſafe from their inroads.

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R 177 .17 In the ſummer of the year 1729, a *Japaneſe* veſſel was wrecked upon the coaſt of *Kamtſchatka*: there were ſeventeen men on board, all of whom, except two, were murdered by Lieutenant *Stimicof*, who happened to be there at that time. The two ſurvivors were ſent to *Peterſbourg*, where they had the ſatiſfaction of ſeeing the murderer of their countrymen publickly executed. In 1730 *John Novogorodof*, and in 1731 *Meyer Shedfordin*, were tax-gatherers in *Kamtſchatka*. We only mention them as being the occaſion of the great rebellion, which we are now to deſcribe.

CHAP. IV.

175 661 R 177 .17 *Of the* REBELLION *of* Kamtſchatka, *the Burning of the Lower Fort, the Subjection of the Rebels, and their Puniſhment.*

THE natives had reſolved for a great while to deſtroy all the *Ruſſians* who were in *Kamtſchatka*; but ſince the diſcovery of the paſſage over the *Penſchinſka* ſea, and the arrival of veſſels with new people, it appeared to them too dangerous: but when Captain *Bering* with his fleet ſailed on the expedition of *Kamtſchatka*, and moſt of the Coſſacks who were ſettled in *Kamtſchatka* were ordered to join Captain *Paulutskoy* at *Anadir*, to ſuppreſs the rebellious *Tchukotskoi*, very few Coſſacks were left in *Kamtſchatka*. This the natives looked upon to be the wiſhed-for opportunity; and during the whole winter the *Niſhnaſhaltalski*, *Klutchefski*, and *Yalofski Kamtſchadales*, under pretence of viſiting one another, travelled through all *Kamtſchatka*, and inſtigated the other inhabitants to join in their deſigns, under

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under pain of being intirely deſtroyed. By theſe means all *Kamtſchatka* entered into a ſtate of open rebellion; and hearing that *Sheſticof* was killed by the *Tchukotſkoi*, they reported that theſe people were marching againſt *Kamtſchatka*, with a view either to have a pretence for collecting themſelves together, or that the *Ruſſian* Coſſacks, out of fear of theſe people, might deſire the *Kamtſchadales* to guard them. Their meaſures were ſo well concerted, that it was a ſingular inſtance of Providence that any of the *Ruſſians* were preſerved; for if they had once been driven intirely out of the country, it would have been difficult for them to have re-eſtabliſhed themſelves. The counſels of the *Kamtſchadales* were far from being ſuch as one would expect from ſavages; they endeavoured to prevent any correſpondence with *Anadirſk*, and kept a ſtrong guard upon the ſea-coaſts, where they might ſeize upon any of the *Ruſſians* that arrived. The chief authors of this rebellion were one *Yaloſski Toyon*, or chieftain called *Fetka Harchin*, who had frequently ſerved the *Ruſſians* as an interpreter, and a chieftain of the *Klutcheſski*, called *Chugotche*.

While this conſpiracy was in agitation, the commiſſary *Skacurdin* was on his departure from *Kamtſchatka*, with a conſiderable party to guard the tribute. They had ſailed from the mouth of the river *Kamtſchatka* towards *Anadir*, but ſoon after contrary winds obliged them to return. The *Kamtſchadales*, informed of their departure, and ready for the revolt, gathered together, and ſailing up the river *Kamtſchatka* killed every *Ruſſian* Coſſack they could find, burned their ſummer huts, and carried off their wives and children into ſlavery. Their chief ſtrength was directed againſt the fort; where arriving in the night, they ſet fire to the prieſt's houſe, concluding that the fire would bring out all the inhabitants. In this they ſucceeded too well, murdering almoſt every perſon, without ſparing either ſex or age. They burned all the houſes, except the fortifications and church, where the goods both of the pub-

175 lick and private people were kept. Thoſe who eſcaped this maſſacre
669 fled to the mouth of the river, and carried the news to their
R countrymen, who had not yet left the coaſt. When the *Klutchejski*
177 chief, *Chugotche*, heard of the taking the lower *Kamtſchatka*
·17 fort he marched thither, killing or taking priſoners all the
Ruſſians he met with; and joining *Harchin*, he informed him that the *Ruſſian* veſſels were yet upon the coaſt, for which reaſon he judged it proper to ſtrengthen themſelves in the fort; and ſending accounts of their ſucceſs to all their countrymen, ordered them to join him. The next day they divided all the plunder, and dreſſed themſelves in the *Ruſſian* habits; and ſome of them, putting on the prieſt's robes, celebrated their own religious ceremonies and conjurations. *Harchin* ordered a new-baptiſed *Kamtſchadale*, who had learned to read *Ruſs*, to ſay maſs in the *Ruſſian* manner, and dreſſed in the prieſt's robes; for which he made him a preſent of 30 red fox-ſkins.

The 3d day after the taking of the fort arrived a *Ruſſian* ſkipper, *Yacob Hens*, with 60 Coſſacks, who was ſent with a deſign to recover the fort from the rebels. He endeavoured by all methods to perſuade them to return to their duty, aſſuring them of a general pardon; but they would not give ear to him: nay, *Harchin*, their chief, told him that he had no buſineſs there, and that he was commiſſary of *Kamtſchatka*, and would himſelf gather the taxes, ſo that they did not want any Coſſacks among them. Upon which *Hens* ſent to his veſſels for ſome cannon, and began on the 26th of *July* to fire upon the fort, where he made a very large breach, which cauſed great confuſion amongſt the beſieged, and gave an opportunity for the women that were priſoners to eſcape. *Harchin*, finding it impoſſible to defend the fort, made his eſcape diſguiſed in women's cloaths; and although he

was purſued by ſeveral, yet he made ſuch expedition that /175
they could not overtake him. After this 30 of the beſieged 669
who remained ſurrendered themſelves; but a *Klutcheſski* chieftain, R.
Chugotche, with a few people that joined him, held out 177
to the laſt man. During their defence the powder magazine .17
was ſet on fire, which reduced the fort and all the riches in it to aſhes. In this ſiege the Coſſacks had four men killed, and a great many wounded. How many of the *Kamtſchadales* were killed was not known, their bodies being conſumed in the fire; not one eſcaped alive, for thoſe who ſurrendered were killed by the Coſſacks, in revenge for the loſs of their wives and children.

The ſudden return of the *Ruſſian* party was the occaſion that this revolt was ſo eaſily quelled; for it prevented their aſſembling in ſuch numbers, as they otherwiſe would have done. However, it was not yet intirely over, for *Harchin*, with ſome other chieftains, collected a good number of people together, and reſolved to march to the ſea ſide, and attack the *Ruſſian* veſſels which were there. But, in the very beginning of his march, he was met by a party of *Ruſſians*, which obliged him to fortify himſelf upon the left ſide of the river *Klucheſka*; the Coſſacks encamping upon the right, ſeveral ſkirmiſhes enſued between them. When *Harchin* ſaw that he could not accompliſh his deſign, he propoſed to treat with the Coſſacks, and offered to come to their camp, if they would ſend one Coſſack as an hoſtage for him; which they granted. He demanded, That they ſhould not intirely ruin the *Kamtſchadales*, and promiſed that for the future they would all live peaceably, only deſiring that they would allow him to go and prevail upon his friends and relations to conſent to this agreement; which being granted, he ſent word, that he could not prevail with them to make peace; and that even his own brother, and a chieftain, *Javatche*, who had accompanied them, had refuſed to return.

The

175 The next day *Harchin* came to the bank of the river with ſome
669 other chiefs, and deſired, that the Coſſacks would ſend a
R. boat to bring him over, and give him two Coſſacks in hoſtage;
177 which they agreed to: but no ſooner was he come over
.17 than they made him priſoner, and ordered the hoſtages to throw themſelves into the river, and ſwim over, while they fired upon the *Kamtſchadales* on the oppoſite bank, who, when their chief was made priſoner, preſently ſeparated; but, being purſued by different parties, moſt of them were deſtroyed. The chieftain *Tegbil*, having defended himſelf a great while, at laſt murdered his wife and children, and killed himſelf; the chieftain *Chugotche*, in vain ſolliciting the inhabitants upon the river *Koſeretſha Shapina* to join him, was in the end murdered by them. After this rebellion, which appeared at firſt very dangerous, and threatened the intire deſtruction of the Coſſacks, was quieted by the arrival of ſuccours, things continued in pretty good order at *Kamtſchatka* until the year 1740, when the *Ruſſians* had ſeven people killed by the natives.

When this rebellion was over, orders were ſent as ſoon as poſſible to Major *Merlin*, with another officer and ſome regulars, together with Major *Paulutſkoy*, to inquire into the cauſe of this rebellion, and the murder of the *Japaneſe*, and to ſend the report thereof to *Jakutſki*; he was at the ſame time to build a new fort, which he did a little lower than the mouth of the river *Ratuga*: this was called the lower fort of *Kamtſchatka*. Having examined into the cauſe of the rebellion, three of the *Ruſſians* were found guilty of death and executed; and two of the chief rebels, with ſome others, both Coſſacks and *Kamtſchadales*, were puniſhed. All the natives, whom they had either taken priſoners, or had made ſlaves of, were reſtored to their liberty. Thoſe *Kamtſchadales* who were put to death, ſeemed to go to execution without the leaſt concern, and under the torture they were ſcarcely heard to moan; nor could they force them to con-
fefs any thing more than what they had done ſeſs
voluntarily before.

feſs any thing more than what they had done voluntarily 651
before.

Since this time all things are intirely quiet there; and it is 692
hoped they will continue ſo, affairs being brought into ſuch 797
order, that the natives themſelves could not wiſh for more, being R.
only obliged to pay their taxes, without the leaſt oppreſſion, 177
which conſiſt only in one ſkin for every man of ſuch creatures .65
as he is uſed to hunt, ſuch as ſables, foxes, or ſea beavers. Juſtice, except in criminal caſes, is adminiſtered by their own chieftains. The Coſſacks are forbidden to demand former debts, which they pretended were due from the natives. Their principal happineſs conſiſts in the converſion of ſeveral of them to Chriſtianity; to which end her Majeſty has been graciouſly pleaſed to appoint miſſionaries and ſchoolmaſters, who keep ſchools in the principal villages for the inſtruction of the youth, both natives and Coſſacks; and they begin now to be ſo much improved, that they even laugh at their former barbarity.

CHAP. V.

The preſent STATE *of the* FORTS *and* VILLAGES *of* Kamtſchatka, *with a particular Account of each.*

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R.
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THERE are five *Ruſſian* forts in *Kamtſchatka*: the 1ſt called the *Bolſcheretſkoi*, the 2d upper *Kamtſchatka*, 3d the lower *Shaltolski*, 4th the haven of *Petropaulauſkay*, and 5th on the river *Tegbil*. The *Bolſcheretſkoi* fort ſtands upon the northen bank of the *Bolſchaia-reka*, or Great River, between the mouths of the rivers *Beeſtra* and *Golſoſtka*, 33 verſts from the *Penſchinſka* ſea. The fort is 70 feet ſquare; the eaſt and north ſides are fortified with paliſades, the ſouth and weſt with

different

361 different buildings; the entrance into the fort is by a ſmall
663 gate on the weſt ſide. Beyond the fort was a chapel, now con-
R verted into a church conſecrated to St. Nicholas, with a belfry
177 upon pillars. There are about 30 houſes of inhabitants, one pub-
.71 lick houſe for ſelling brandy, and a diſtillery. There are about
45 Coſſacks; and though their children pay the common head
tax, yet 14 of them do duty with the other Coſſacks. This fort
is the weakeſt of all; but they ſeem to be very ſecure, as the
neighbouring *Kamtſchadales* were almoſt the firſt that ſubmitted,
361 and have always been faithful, and lived peaceably. With re-
R gard to its ſituation it has great advantages: firſt, all veſſels that
177 come by ſea can come into the Great river, from which they
.71 receive their goods at the firſt hand: ſecondly, they receive great
profits from the perſons that arrive there, whom they furniſh
with lodging and board: thirdly, they are great gainers by the
tranſporting goods from thence to the other forts: fourthly, they
have a better opportunity than the others of getting *Kamtſchatka*
beavers, which is now reckoned a principal commodity: fifthly,
132 in the ſummer they have the greateſt plenty of fiſh, which they
136 catch with little trouble and expence; for this reaſon the com-
mander in chief of all the *Kamtſchatka* forts generally lives here,
ſending out deputies to the others. The only diſadvantage they
have is, that in the ſummer, during the time of fiſhing, they are
very ſubject to rainy weather, which ſpoils a great many of their
137 fiſh, and thereby reduces them to great difficulties for food. If
this river was furniſhed with wood ſufficient the difficulty might
be removed, as inſtead of drying them in the ſun they might
ſmoke them, as the inhabitants of *Ochotſka* do. But this is impracticable becauſe of the diſtance of the wood, and the trouble of bringing it down. It is ſo ſcarce here, that what they abſolutely muſt have for the boiling of ſalt and train oil, they are forced to provide at the diſtance of three days' journey, and can bring no more than will ſerve to make 40 pounds of ſalt.

The

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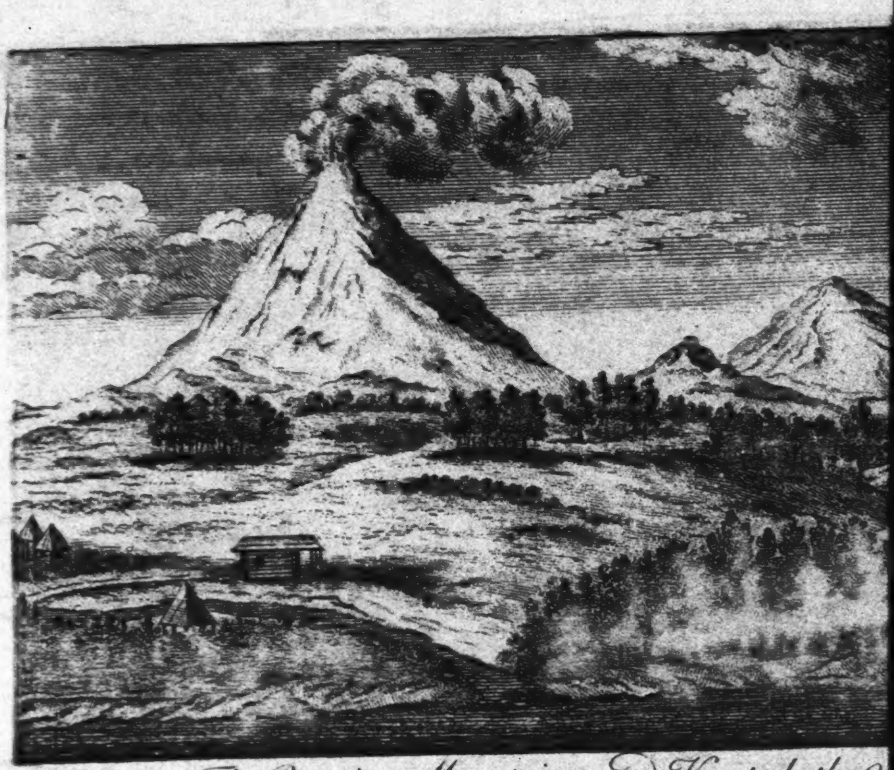

The Burning Mountain named Kamtschatka

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R.
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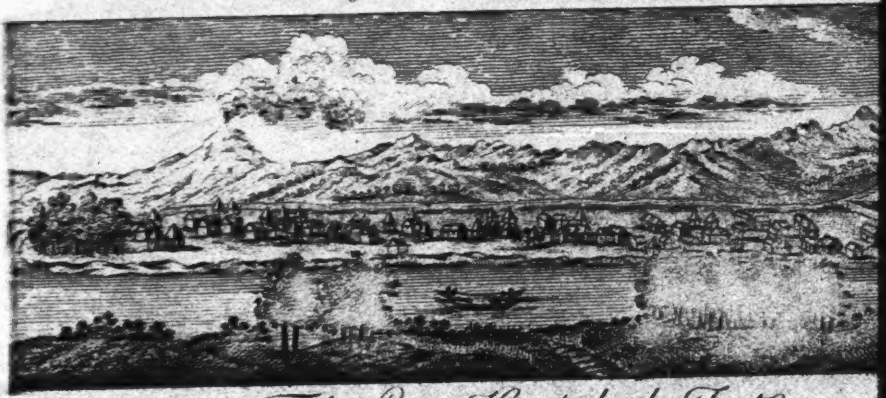

The Lower Kamtschatka Fort.

Facing P.265

The upper fort of *Kamtſchatka* was the firſt built, and 361
for ſome years reckoned the principal, as the chief commiſſary 563
lived there. It ſtands upon the left bank of the *Kamtſchatka*, R
near the mouth of the little *Kaly*, about 69 verſts from the riſe of 177
the *Kamtſchatka*, 242 verſts in the ſtraight road from the *Bolſcheretſkoi* 17
fort. It is 17 fathom ſquare; the gate fronts the river, and
over it is a warehouſe. Within the fort is the office for receiving
the taxes, a room for keeping the hoſtages, and two magazines.
Without the fort is a church conſecrated to St. *Nicholas*, the commiſſary's
houſe, a publick houſe, diſtillery, and 22 private houſes for
the accommodation of the garriſon, which conſiſts of 56 Coſſacks.
This fort has the advantage of the *Bolſcheretſkoi*, the weather being 137
here generally pretty good, and the wood, though only poplar, can
be procured with little trouble, and is ſo large and ſubſtantial that
it is very uſeful for building: beſides the ſoil is better here, being
much fitter for agriculture than any of the other parts. The fiſhery 136
is indeed very poor, being at ſuch a diſtance from the ſea. The
fiſh come up in ſmall numbers, and ſo very late, that the
inhabitants of the *Niſhnaſhaltalſki* fort make all their winter
proviſion before they begin to fiſh in the upper fort; ſo that
almoſt every ſpring there is a ſcarcity of proviſions. Their ſalt
and train oil they either buy from the inhabitants of the lower
fort, or, notwithſtanding the great diſtance, they go themſelves
and boil it at the mouth of the river *Kamtſchatka*, which is
400 verſts from the upper fort. Formerly they uſed to have
great plenty of ſea beavers in the Beaver Sea, but at preſent very
few of them are caught; ſo that the inhabitants have their only
hope of ſupport from agriculture, to which if they apply themſelves,
they may expect more profit than from any commerce
with the natives; and, if they neglect it, it will be impoſſible
for them to live there.

361
The lower *Kamtſchatka* fort is 397 verſts diſtant from the upper R
fort, and ſtands upon the ſame ſide of the river, about 30 verſts 177

.17

36/ from its mouth. The fort is a parallelogram made with paliſades;
R its breadth is 40, and its length 42 fathoms. In
177 the fort is a church dedicated to the Virgin *Mary*, the office
·17 and magazine for the taxes, ſtores, and the commiſſary's
houſe. Theſe are all built of larch wood, and much neater than in any other fort. Without the fort are 39 private houſes, beſides the publick houſe and diſtillery. The male inhabitants are 92, of all ranks.

136 This fort, with regard to the neceſſaries of life, may be
137 reckoned preferable to any other. Here the inhabitants catch plenty of fiſh, which they dry and ſalt in ſufficient quantities for proviſion through the whole year: here they have wood enough, not only for building their houſes, but alſo for building ſhips, to which the river ſerves as an harbour; and by its proximity to the ſea they boil ſo much train oil and ſalt as to ſupply the other forts. Game is here ſo plenty, that the pooreſt Coſſack ſeldom dines without a ſwan, gooſe, or duck; and through the whole winter, in the ſprings, they catch freſh fiſh. Wild berries of all ſorts are here in great abundance, which the inhabitants lay up in ſtore for the winter, and which next to fiſh is the greateſt part of their ſuſtenance; and the beſt *Kamtſchatka* ſables are caught near the river *Tegbil.* All the goods which they get from the *Koreki*, ſuch as deer-ſkins, and even the fleſh of the deer itſelf, are cheaper here than any where elſe: beſides, this is a moſt fruitful ſoil, where they may cultivate corn of all ſorts. The only inconvenience that they have is, that both *Ruſſian* and *Chineſe* goods are dearer here than at any other fort, which is owing to their land-carriage from the *Bolſcheretſkoi Oſtrog* hither, which coſts four rubles a pood.

36/ The fourth fort was built upon the bay of *Awatſcha*, in the
R pear 1740; and inhabitants were brought hither from the upper
177 and lower *Kamtſchatka* forts. The houſes are tolerably good,
·91 particularly thoſe which were built for the people of the *Kamtſchatka*

chatka expedition upon the haven of *Petropaulauſkay.* Its great 361
beauty is its church, which is finely ſituated, and very well R.
built. This fort has almoſt the ſame advantages and diſadvan- 177
tages as the *Bolſcheretſkoi* fort, with this difference, that here the .71
hunting of the beaver is more convenient; but the water is bad 312
and unwholſome, ſo that they ſend frequently from this bay to the river *Awatſcha* for their freſh water.

We can give no account of the fifth fort, which was built upon the river *Tegbil* after my departure from *Kamtſchatka.* It was garriſoned with 37 male inhabitants. Mr. *Steller* tells us, that this fort was built with a view to reſtrain the ſettled *Koreki*, and for a ſtage to thoſe who travel round the *Penſchinſka* ſea to *Ochotſka*; and, in caſe of neceſſity, to protect the rein-deer or wandering *Koreki* againſt the *Tchukotſkoi.* The inhabitants of this fort can deprive thoſe of the lower *Kamtſchatka* fort of ſeveral advantages, becauſe they lie more convenient for hunting the ſable upon the river *Tegbil,* and the *Koreki* rather chuſe to bring their goods to them than to the two other forts, as being nearer.

CHAP. VI.

Of the Manner in which the Coſſacks live there; of their DISTILLERY, PROVISIONS, &c. 563

THE Coſſacks of *Kamtſchatka* live almoſt in the ſame manner as the natives, feeding like them upon roots and fiſhes; and their occupations are nearly the ſame. In the ſummer they catch fiſh for their winter proviſion, and gather nettles, of which they make nets. Their difference only ſeems

563 to conſiſt in this, that the Coſſacks live in houſes, and the natives in huts under ground; the Coſſacks uſually eat their fiſh boiled, and the natives moſtly dry; beſides, the Coſſacks dreſs their's ſeveral ways different from the natives. As it is impoſſible for people to live there without the help of women, who are ſo neceſſary in many parts of their work, ſuch as cleaning their fiſh, drying their roots, ſpinning and making their ſhirts and cloaths, and as the Coſſacks firſt ſettled in *Kamtſchatka* without their wives, whom upon account of the difficulty of the journey they could not tranſport thither, I ſhall now relate what methods they uſed to make up for this deficiency.

144 One may eaſily imagine, that the Coſſacks did not reduce theſe
563 people without uſing force; and in theſe wars they took priſoners
177 many women and children as well as men, and obliged
them to perform all the labour. The care of overlooking theſe
567 ſervants was entruſted to ſuch as they made their concubines, whom they frequently married if they had any children by them; and ſometimes the natives offered them their daughters, whom they promiſed to marry as ſoon as the prieſt arrived: ſo that it ſometimes happened that the Coſſacks had a marriage and chriſtening at the ſame time; for then there was but one prieſt in all *Kamtſchatka*, who lived in the lower fort, and once in a year, or once in two years, viſited the other ſettlements.

563 The Coſſacks, a people rude enough themſelves, ſeemed to be
567 pretty well pleaſed with the manner of living here, uſing the natives as their ſlaves, who furniſhed them with ſables and other furrs in abundance, and paſſing the greateſt part of their time in playing at cards: their only want ſeemed to be that of brandy. Before there were any brandy ſhops they uſed to meet in the office where the tax was received: here the gameſters brought their furrs, and, when they had no furrs, even their ſlaves; and

and ſometimes they played 'till both parties had pawned their 563
cloaths for brandy. Such way of living, one may eaſily believe, 567
was attended with great confuſion; but what the poor ſlaves ſuffered is almoſt incredible, being obliged ſometimes to change their maſters twenty times a day.

The invention of making ſpirits happened accidentally. The 563
Coſſacks, after the manner of the natives, made a great proviſion of all kinds of berries for the winter. It happened ſometimes that they began to ferment in the ſpring, and could be uſed no other way than in drink. This drink was obſerved to cauſe drunkenneſs when taken in great quantities; upon which they began to diſtil it, and, to their great ſurpriſe and pleaſure, found that it produced a good ſpirit. They have ſince diſcovered that they could make brandy from an infuſion of the ſweet graſs, and now they have ſpirits in plenty. Their method of preparing this herb for diſtillery we have already explained.

Thoſe that are curious to know whence the Coſſacks ſettled 563
here obtained their riches, muſt be informed that they owe them 661
to the following circumſtances: firſt, when they conquered the 651
natives they made all the plunder they could: ſecondly, every 439
party of Coſſacks, that was employed in gathering the taxes,
obliged each tributary native, beſides the crown tax, to give them R.
four fox-ſkins and one ſable, which they divided among themſelves: 177
thirdly, by their commerce with the natives, whom they .65
obliged to pay a very high price for every trifle they furniſhed them with. Although, at preſent, the Coſſacks are forbidden to take any thing more than the crown tax, yet they are ſtill allowed to ſet what price they pleaſe upon their goods; and indeed they ſell them, or change them for furrs, at very great profits, and ſometimes for proviſions, nets, and boats. Without 563
this they would not be able to live upon their ſmall pay, which is no more than what they uſed to receive at *Jakutſki*, and, both in money and proviſions, does not amount to above 14 rubles

562 rubles a year; and here they cannot maintain and cloath themſelves for leſs than 40.

CHAP. VII.

Of their TRADE.

441
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ALTHOUGH from the very beginning ſome people went along with the tax-gatherers, who carried little trifles to diſpoſe of among the natives, theſe people could not be called merchants, becauſe they did duty in the ſame manner as the Coſſacks. By degrees many of them got themſelves enrolled under that name, on paying the poll-tax, and as ſuch ſettled with their families in theſe places; but the true merchants began to bring conſiderable quantities of goods firſt to *Ochotſka*, and then to *Kamtſchatka*, at the time when the ſecond expedition to *Kamtſchatka* took place. The number of the people increaſing made the demand greater; and their profits were ſo conſiderable, that ſeveral, who came out of *Ruſſia* as common labourers, in ſix or ſeven years began to trade for 15000 rubles or more: but, on the other hand, ſome were ruined from their extraordinary gains, which led them into various ſorts of luxury and extravagance: and thoſe merchants particularly who ſent factors thither run the greateſt riſk; however, the principals had the ſatisfaction to find that the government took care to ſee juſtice done them.

After the expedition to *Kamtſchatka* the trade began to be upon another footing, the officers and ſervants in this expedition buying their goods of the merchants for ready money; whereas they were obliged to give the inhabitants credit 'till they returned from their travelling among the *Kamtſchadales*, when they were

paid in furrs of different ſorts. In fine, the exchange of goods 563
with the *Kamtſchadales* and *Chineſe* is ſo profitable, that, notwithſtanding 441
all expences occaſioned by the diſtance, dearneſs of
tranſport, and other difficulties, we may reckon that a 1000
rubles will produce 4000, provided they remain but one year in
Kamtſchatka; but if they remain longer, there is a conſiderable
loſs. The reaſons of this are, firſt, that upon their arrival, being
flattered with the high prices of things, they ſell every thing, even
their own cloaths and proviſions, hoping ſoon to leave the country,
in which if diſappointed, they are obliged to buy them back
again at double price: ſecondly, that the furrs by lying, loſe their
colour and value: thirdly, that the place is exceſſively expenſive
in regard to lodging, warehouſe-room, victuals, and ſeveral other
particulars.

Goods demanded in *Kamtſchatka*, beſides the natural produce 439
of *Ruſſia*, are *European* goods, from *Siberia*, *Bobaria*, and the
Calmuks. From *Europe* they receive coarſe cloaths of various
colours, linen, ſerges, knives, ſilk and cotton handkerchiefs,
red wine, a little ſugar, tobacco, and ſeveral toys. From
Siberia, iron, ſeveral iron and copper veſſels, and inſtruments,
ſuch as knives, hatchets, ſaws, and fire-ſteels; alſo wax, hemp,
yarn for nets, tanned deer-ſkins, coarſe *Ruſſian* linen and cloth.
From *Bobaria*, and the country of the *Calmuks*, they bring ſeveral
different ſorts of cotton goods. From *China*, ſeveral ſilk
and cotton ſtuffs, tobacco, coral, and needles, which are much
preferred to thoſe from *Ruſſia*. From the *Koreki* they receive
great quantities of rein-deer-ſkins, both dreſſed and undreſſed,
which they may ſell in what quantities they pleaſe at any
time. Merchants muſt take care not to have too great a ſtock 437
of any other goods; for the inhabitants of this place, *Ruſſians* 511
as well as natives, never buy any thing before they are in abſolute
want of it, even if they could buy it at half price.

The

441 The goods ſold at *Kamtſchatka* at prime-coſt ſcarcely exceed 10 or 12,000 rubles, but the ſales amount to 30 or 40,000 rubles; and if a merchant carries theſe *Kamtſchatka* goods to the fair upon the frontiers of *China*, he may receive double the price he buys them at; ſo that this commerce may eaſily appear to be very advantageous.

439 The goods that are brought out of *Kamtſchatka* conſiſt of furrs,
651 ſuch as ſea beavers', ſables', foxes', and a few otters' ſkins. As there was formerly no money in this country, the way of trading
437 was in exchange for furrs; and now they have money, they fix the price by the ſkins, reckoning a good fox-ſkin at a ruble.

All goods brought out of *Kamtſchatka* pay 10 per cent. duty, but the ſables 12.

CHAP. VIII.

600 ### *The Different* ROADS *between* Jakutſki *and* Kamtſchatka.

THOUGH it may at firſt appear needleſs to mention all the different roads to *Kamtſchatka*, eſpecially as ſeveral of them are now no more uſed, yet, upon due conſideration it will be found to ſerve for an illuſtration of the different ſettlements of the *Ruſſian* colonies, and to ſhew what people are ſubject and pay taxes to each of theſe ſettlements. It will alſo explain the manner of reducing theſe people and making them tributary, and deſcribe the difficulties of this journey, although there had been no danger from an enemy, in which the tax-gatherers were continually expoſed to hunger and cold in an unknown country, whereby many of them loſt their lives. The Coſſacks were only able to make this journey during the winter, and had no other proviſions or ſtores than what they dragged after them upon ſmall ſledges: and as they were obliged to go through great waſtes, where ſometimes by reaſon of the drifts of ſnow they were forced to ſtay ſeveral days in the ſame place, their proviſions were entirely conſumed; ſo that they were obliged to eat their leathern belts, ſtraps, and ſhoe-ſoles. It is a thing incredible that a man upon the road could live 10 or 12 days without victuals, and yet in *Kamtſchatka* they pretend that this has frequently happened to ſeveral.

From *Jakutſki* the road to *Kamtſchatka* was down the river *Lena* to its entrance into the Frozen Ocean, and thence by ſea to the mouth of the river *Indigirka* and *Cova*, from whence they proceed over land to the *Penſchinſka* or *Olutorſkoy* ſea, and coaſt it round by the ſhore in boats. However this road was attended with great inconveniences; for in the beſt ſeaſon, when the ſea was free from ice and the wind favourable, they could not perform it in leſs than one year; but if the one happened to be contrary, or the other frozen, their boats were frequently broken to pieces, and the voyage coſt them ſometimes two, and ſometimes three years. From *Jakutſki* to the mouth of the river *Yani* is 1960 verſts. However this road is now entirely diſuſed.

Another paſſage was all by land: from *Jakutſki* they went to the ſtage of *Aldanſki*, from thence to upper *Yanſki*; thence through *Zachiverſk*, *Uyandſki*, *Alaſeſki*, upper and lower *Covimſki*, to the fort of *Anadir*; thence to the lower *Kamtſchatka*, and thence to the upper fort upon the *Bolſcheretſkoi*.

The *Alazinſka* ſtage ſtands at a good diſtance from the mouth of the *Alaſſa* river, which falls into the Frozen Ocean. It is about 509 verſts diſtant from *Uyandinſka*.

The *Anadirſka* fort lies on the left of the river *Anadir*, about 963 verſts from the lower *Kovinſka*. From the fort *Anadirſka* to the lower *Kamtſchatka* is 1144 verſts. This is at preſent the common road as far as *Anadirſka*, but ſeldom to *Kamtſchatka*, unleſs it be neceſſary to viſit the different poſts.

A third paſſage is moſtly by water. They ſail down the *Lena* from *Jakutſki* to the conflux of the river *Aldan*, up the *Aldan* to the mouth of the river *Mai*, up the *Mai* to the entrance of the river *Judoma*, and up the *Judoma* as far as the place called the croſs of *Judoma*; from thence over land to *Ochotſka*, whence they go in boats to the *Bolſchaia-reka* or Great River, or by land along the coaſt of the *Penſchinſka* bay: but the laſt is not quite ſafe upon account of the *Koreki*, who are frequently in rebellion. However, this paſſage up the rivers to the croſs of *Judoma* is very tedious; and it is reckoned a piece of good fortune to make the paſſage in one ſummer: there are likewiſe ſeveral troubleſome water-falls in this paſſage.

The fourth, and moſt convenient road in the ſummer-time, lies over the hills; and as I travelled this myſelf, I ſhall give my own journal, which perhaps may be of ſome uſe in laying down the geography, the common maps wanting moſt of the rivers in this part.

From *Jakutſki* they go down the river *Lena* to *Yarmunka*, where they prepare themſelves for their journey. The next place to this is *Kumatki*; we then paſſed ſome villages, and the following day croſſed the river *Sola*. This river riſes about 100 verſts from the ridge, and falls into the *Lena* about ſix verſts below where we paſſed it. We fed our horſes by the lake *Kutchugna*, about 11 verſts beyond the *Sola*; and lodged upon the lake *Oryoncamus*, 13 verſts from the laſt place. The 3d day, paſſing the lake *Hatila*, we fed our horſes upon the lake *Arelaka*; and lodged that evening upon the lake *Talba*. In about 14 verſts from *Talba* we began to aſcend the ridge; paſſing which, we went through the deſerts *Quubalag*, *Keindu*, and fed our horſes by the lake *Satagg*, 20 verſts diſtant from *Talba*. We came next to the lake *Ala-atbaga*, where we lay that night.

In a few verſts from *Ala-atbaga* we came to the little river *Kocora*, which, 22 verſts below the place where we paſſed it, falls into the river *Tata*: we went down to its very mouth. There are ſeveral lakes near it; and a verſt before we came to the laſt is a ſtation where generally the horſes are changed, and where cattle are bought for ſuſtenance in paſſing the deſerts. Every traveller buys ſome in his turn, which are divided equally among all the company. They endeavour to purchaſe them as ſmall as they can, that every one may only have ſuch a portion as he can conſume; for even though roaſted or baked it is preſently filled with maggots. This ſtation is kept by Coſſacks ſent from *Jakutſki*: it lies 15 verſts from the place where we paſſed the river *Kocora*. Having lodged here one night, we ſet out next morning, and paſſed the lakes *Emiti* and *Talbachan*, about one verſt and a half from the mouth of the *Kocora*. Then we travelled through the deſerts of *Karakoi* and *Tetaca*, and lodged that night by a little lake. Our road was near the ſide of the river *Tata*: this day we travelled about 15 verſts. The places that we remarked beyond this were, the deſerts of *Choraita*, *Menay*, *Koratoi*, *Tavalac*, and *Suſun*, and the little river *Tula*, which falls into the *Tata* about four verſts below where we paſſed it, and 13 diſtant from where we lodged the night before. Thirteen verſts from *Tula* the river *Namgare*, after a courſe of about 60 verſts, falls into the *Tata*. Between theſe two rivers are lake *Cungi*, and the deſerts *Sadochta* and *Betegeti*. Beyond the *Namgara* lies the lake *Neerga*, and the waſte places *Kalachku*, *Boorgunechtec*, and *Taalgeram*. Two verſts from the *Tata*, and 14 from *Namgara*, is the ſtation *Jockſovanſka*, kept by Coſſacks from *Jakutſki*: here we lodged. Travelling about four verſts and a half we paſſed the river *Tata*, which, as we were told by the people, riſes there about 150 verſts above our paſſage, and about as much below it falls into the river *Aldan*. Four verſts beyond the *Tata* we paſſed the little river *Lebagana*, which runs

runs into the *Tata*. Between theſe rivers lies the lake *Yeleyegnok*. Half a verſt from the river *Lebagana* we paſſed the river *Beſurac*, which a little below falls into the *Lebagana* upon the right hand. Five verſts farther is the river *Badaranac*, which falls into the *Beſurac*. Paſſing a ridge we came to the ſpring of the river *Tuguta*, which, after a courſe of 30 verſts falls from the left into the river *Kamgal*. The paſſage over the ridge is three verſts. Going down the left ſide of the river *Taguta* we ſaw the lake *Utal*, and paſſed the river *Kirtak*, which falls into the *Taguta* five verſts from its ſpring. Two verſts and a half from *Kirtak* we lodged upon the lake *Beſictaki*: from this lake to the ford of the river *Amga* is 18 verſts. We croſſed the river *Beſurac*, which falls into the *Taguta* upon the left, and paſſed by the lakes *Mycharelac* and *Taguta*, near which are other lakes, *Taraga*, *Maralac*, and *Melca*. Half a verſt from *Melca* is the paſſage over the river *Amga*, which is about 40 or 50 fathoms broad, and falls into the *Aldan* about a verſt and a quarter below the paſſage. Between the mouth of the river *Amga* and *Tama* is about 119 verſts. This river is remarkable, by having ſeveral people ſettled here for agriculture: however they have made very little progreſs; nay, they have even forgot their native language, and have acquired the language and cuſtoms of the *Jakutſki*; ſo that they can be diſtinguiſhed in nothing but by their being Chriſtians. Here we were obliged to wait all night for the ferry. The next morning we went up the other ſide of the *Amga*, and about two verſts from the ferry we came to the little river *Ulbuta*, which loſes itſelf in the *Amga*. We aſcended this river to its ſpring, and then going over to the ſpring of the *Chuoptchunu*, went down that rivulet to its entrance into the river *Nocha*. The river *Chuoptchunu* runs through the lake *Darka*; and the *Nocha* falls into the river *Aldan* about 120 verſts from its riſe. From the *Nocha* we went 12 verſts over a ridge and came to the river *Voroni*, which falls into the *Nocha*.

Two verſts further is the little river *Yilga*, which after a courſe of 20 verſts falls into the *Nocha*: here we lodged. One verſt beyond our quarters is the river *Atctachhatch*, which we aſcended eight verſts; then leaving it, four verſts further we came to the *Chipanda*, along which we went 16 verſts to where it falls into the river *Aldan*. The river *Chipanda* runs through the lakes *Bileor*, *Druk*, and *Chipanda*. The *Aldan* is a large navigable river, which falls into the river *Lena* upon the right ſide, 200 verſts below *Jakutſki*. We paſſed this river in boats: the ferry lies eight verſts above the mouth of the *Chipanda*. From *Yalmanca* to this place the country was full of woods; though the greater part was larch and birch, yet upon the river *Amga* we now and then met with ſome fir-trees, but rarely a poplar. From the *Aldan* we travelled to the river *Bela*, which is 20 verſts. Upon the road we ſaw ſeveral lakes, and the river *Keriatma*, which falls into the river *Aldan*. Here we lodged. The next day our road lay up the river *Bela*, upon which we paſſed the rivers *Sacil*, *Ulac*, and *Lehvena*, where we lay: this day we travelled 20 verſts. The following day we paſſed the river *Argadchika*; and nine verſts further lies the hill *Telabi*, a little beyond which begins the black foreſt: three verſts further we took up our quarters. The next day, upon account of the rain, we did not move before four o'clock in the afternoon. Five verſts beyond the black foreſt runs the river *Hagolla*, and 20 verſts further the *Chagdolla*; both which run into the ſame *Bela*. During this journey we paſſed the river *Bela* three times. As the ſummer had been pretty dry, our paſſage was very favourable, being able to ford it; but in a wet ſeaſon it frequently is attended with great danger. They are obliged to paſs it upon floats, which, by the ſtrength of the current, are frequently driven upon rocks or the trunks of trees. There is great plenty of wood upon the river *Bela*. Our road lay up the *Chagdolla*; in the ſpace of 16 verſts we croſſed it ſeven times. About 15 verſts from the laſt paſſage we came to the river *Unacam*, which is about 30 fathoms broad, and falls into the *Aldan*. Our road lay along this river to its very riſe. Ten verſts beyond the place where we paſſed it is a little river whoſe name we could not learn; upon which, half a verſt from its mouth, is a lake which they call *Buſkeol*, that is, Icy lake, as the ice in it does not thaw during the greateſt heats in ſummer. It lies between high rocky hills; its length is about 150 fathoms, and breadth 80; The thickneſs of the ice is about two feet, and it appears like the ſpring ice, bluiſh and full of holes. Here it is always cold in the hotteſt day. We now travelled 20 verſts over the hills, and came again to the river *Bela*, which we paſſed. Next day we travelled eight verſts further, and came to the head of the *Akera*, which falls into the *Yuna*: Our road lay ſeven verſts along this river. Then we aſcended the river *Yuna*, and paſſed it about 18 verſts from the *Akera*: this river falls into the *Aldan*. Next day we paſſed the river *Antcher*, and lay this night by the *Terrene*, or the little ice magazine, about 200 fathoms long and 50 broad. Five verſts from *Terrene* is another ice magazine, which is ſeven fathoms long and three broad; and ten verſts further, all upon the ſame river, is yet a third; five verſts from which laſt is the riſe of the river *Akachon*, which falls into the *Yuna*.

From *Yalmanka* we departed the 9th of *July*, 1737, and arrived at *Ochotſka* the 19th of *Auguſt*. We reſted ſeven days upon the road, and travelled thirty-four. It may be ſaid, in general, from *Jakutſki* to the ford of the river *Bela* the road is tolerable; but from thence to *Ochotſka* as troubleſome as one can eaſily imagine, lying always upon the ſteep banks of rivers, or through thick woods: The banks of the rivers are full of looſe round ſtones, ſo difficult to paſs, that it is ſurpriſing how the horſes can travel over them. The higher the hills, the more miry they are; and on the very tops of them are ſuch bogs and ſloughs, that if a horſe breaks the ſurface he ſinks without any poſſibility of recovering

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covering him : it is terrible to ſee the earth bending like waves for ten fathoms round one. The beſt time of travelling from *Jakutſki* is from the beginning of ſummer until the month of *July*; for if they wait 'till *Auguſt* they are in danger of being ſurpriſed by the ſnow, which falls very early on the mountains.

We took our departure from *Ochotſka* on the 4th of *October*, in the Fortuna packet-boat, which had ſailed thither from *Kamtſchatka*. At night there was ſuch a leak in our veſſel, that the people below were up to their knees in water; and though we worked with two pumps, and baled it with kettles and pans, and whatever fell in our way, yet the water decreaſed very little: beſides our veſſel was ſo heavily laden that it came over the gunnel. We had therefore no other means of ſaving our lives than by lightening the veſſel, for at this time there was a dead calm; ſo that all upon deck, or about the ſides of the ſhip, was immediately thrown overboard: but as this produced very little advantage, about 400 pood was caſt out of the hold, which relieved us; the water in the veſſel began to decreaſe, and at laſt was intirely cleared, However, the pumps were ſtill kept going, and no body except the ſick were excuſed: in this manner we ſailed 'till the 14th of *October*. Beſides the continual fatigue of pumping we were expoſed to violent cold and continual ſleet. This day at nine in the morning we arrived at the mouth of the *Bolſchaia-reka*; but, as if all our voyage was to be unfortunate, our ſailors, not knowing whether the tide was ebbing or flowing, miſtook the ebb for the flood, and ran into the mouth of the river. They were no ſooner come to the broken water, which is very great at the beginning of the ebb or flood even in the calmeſt weather, and was at preſent much increaſed by a ſtrong north wind, than we loſt all hopes of advancing up the ſtream. It was therefore the opinion of ſeveral, that we ſhould go out again to ſea, and wait the time of the flood: but lucky was it for us that we did not purſue this reſolution; for during the whole

000 week following there was ſuch a ſtrong north wind we ſhould in that caſe have been driven ſo far out to ſea that we muſt all have periſhed: but the majority inſiſted on running the veſſel on ſhore, which we did about 100 fathoms ſouth of the mouth of the river. In the evening, at the next high water, we took out the maſt, and the following day ſeveral planks; the reſt was ſtove to pieces, and carried away by the ſea. Now we could obſerve in what danger we had been, for we found all the planks of the veſſel quite black and rotten.

We lived upon the coaſt 'till the 21ſt; and during our ſtay there happened an earthquake, but ſo inconſiderable that we hardly knew of it, but imputed the motion we obſerved to our having been toſſed ſo long at ſea: however, ſome *Kuriles* who came down informed us, that in the place of their habitations it had been very violent, and that the water roſe exceeding high. On the 21ſt of *October* we entered the *Bolſchaia-reka* in boats that were ſent to us from the fort, and on the 22d in the evening we arrived at the fort.

Notwithſtanding that the journey from *Jakutſki* to *Kamtſchatka* is very troubleſome, yet the return is tolerably agreeable; for the veſſels that winter at *Kamtſchatka* depart early in the ſummer, when the weather is generally fair and the days long; and at that time one can go by water even to the ferry of the river *Bela* or the *Aldan*, and from thence on horſeback to *Jakutſki*. The only trouble that they have is before they come to the croſs of *Judoma*.

In my return I came from *Ochotſka* to *Judoma* in ſeven days, and from thence to the mouth of the *Mai* in five days, and from thence to *Jakutſki* in five days more; ſo all together make 17: however, upon account of the rapidity of the ſtream, the paſſage up the *Uda*, which I have made in five days, ſometimes coſts five or ſix weeks.

The END.